### BUSINESS MEETING

# BEFORE THE

# CALIFORNIA ENERGY COMMISSION

In the Matter of:	)
Business Meeting	)
	)

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

WEDNESDAY, JUNE 23, 2010 10:00 A.M.

Reported by: Peter Petty

### COMMISSIONERS PRESENT

Karen Douglas, Chair

Jeffrey D. Byron

Anthony Eggert

### STAFF PRESENT

Melissa Jones, Executive Director Michael Levy, Chief Counsel Jennifer Jennings, Public Advisor Harriet Kallemeyn, Secretariat Claudia Chandler

Bill Pennington Helen Lam Larry Rillera Jennifer Allen Joseph Wang Karen Perrin Miki Crowell Patrick Saxton Reynaldo Gonzalez Philip Misemer Chris Scruton Marla Mueller Joe O'Hagan Donald Kazama Paul Roggensack Dustin Davis Caryn Holmes Pat Perez

ALSO PRESENT

# Interested Parties

Andrew Finlaysin, State Controller's Office

PUBLIC COMMENT

Robert Raymer, CBIA Vince Sugrue, SMW Local 1104 Erik Emblem, SMACNA

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1.	CONSENT CALENDAR.	
	A. EDTEK. Possible approval of Amendment 1 to Contract 500-06-003 with EdTek for a 12-month, no-cost time extension made necessary because the project was delayed due to negotiations for the purchase of the company by Skysol, Inc.	8
1B.	Energy Pro 5.1. Possible approval of Energy Pro 5.1. Energy Pro is a computer simulation program used to demonstrate compliance with the 2008 Building Energy Efficiency Standards. This action includes the decertification of Energy Pro 5.0, which has Energy Commission interim approval until June 30, 2010.	14
1C.	MICROPAS 8.1. Possible approval of MICROPAS 8.1. MICROPAS is a computer simulation program used to demonstrate compliance with the 2008 Building Energy Efficiency Standards. This action includes the decertification of MICROPAS 8.0, which has Energy Commission interim approval until June 30, 2010.	14
1D.	CALRES 2008 v. 1.1. Possible approval of CALRES 2008 v. 1.1. CALRES is the Commission's public domain software used to demonstrate compliance with the 2008 Building Energy Efficiency Standards. This action includes the decertification of CALRES 2008 v.1, which has previously been approved by the Energy Commission.	14
2.	SACRAMENTO MUNICIPAL UTILITY DISTRICT. Possible approval of Contract 400-09-023 for \$19,969,421 with Sacramento Municipal Utility District to develop and deliver a program for energy efficiency audits and home performance retrofits in the Sacramento region (ARRA-SEP funding)	17

### Items

- 3. CALIFORNIA ALTERNATIVE ENERGY AND ADVANCED

  TRANSPORTATION FINANCING AUTHORITY. Possible approval of Contract 600-09-013 with the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) to reduce the amount funded from \$100 million to \$51 million. This inter-agency agreement is for the development and management of alternative and renewable fuel and vehicle technology transportation financing programs. (ARFVTF funding.)
- 4. CALIFORNIA ALTERNATIVE ENERGY AND ADVANCED

  TRANSPORTATION FINANCING AUTHORITY. Possible approval of Contract 600-09-017 for up to \$15 million with the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) to establish and implement the California Ethanol Producer Incentive Program.

  (ARFVTF funding.)
- 5. ELECTRIC TRANSPORTATION ENGINEERING CORPORATION. Possible 30 approval of Grant Agreement ARV-09-005, awarding \$8 million to Electric Transportation Engineering Corporation for the Nissan Electric Drive Vehicle Demonstration and Vehicle Infrastructure project. This project will provide the infrastructure to support an initial deployment of 1,000 Nissan Leaf electric cars in the San Diego area. (ARFVTF funding.)
- 6. COULOMB TECHNOLOGIES. Possible approval of Grant Agreement ARV-09-007, awarding \$3,417,000 to Coulomb Technologies to provide 1,667 networked electric vehicle charging stations to the San Francisco, Sacramento and Los Angeles regions. (ARFVTF funding.)
- 7. DEPARTMENT OF GENERAL SERVICES. Possible approval of Grant 40 Agreement ARV-09-006, awarding \$4 million to the Department of General Services, in partnership with Propel Fuels, to build 75 ethanol (E85) dispensers at publicly accessible fueling stations throughout California. (ARFVTF funding.)

#### Items

- 8. COUNTY OF SHASTA. Possible approval of Agreement 006-09- 43
  ECA for a loan of \$527,380 to the County of Shasta to
  install two 125-ton chillers, nine packaged HVAC units
  and controls, upgraded interior lighting and occupancy
  sensor controls, and demand control ventilation systems.
  (ECAA funding.)
- 9. TOWN OF YOUNTVILLE. Possible approval of Agreement 010- 45 09-ECA for a loan of \$200,473 to the Town of Yountville to upgrade lighting and HVAC systems at various town owned facilities, upgrade building electrical systems and insulation, retrofit streetlights, and replace motors at the waste water treatment plant. (ECAA funding.)
- 10. ICF CONSULTING, LLC. Possible approval of Contract 600- 47 09-018 for \$247,900 with ICF Consulting, LLC to acquire background information and develop design criteria for wind farms and related infrastructure development in Baja California, Mexico. This project will support a cooperative initiative between California and Baja California, Mexico to promote cross-border energy infrastructure that allows for renewable energy trade. (ERPA funding.)
- 11. GUIDELINES FOR SOLAR ELECTRIC INCENTIVE PROGRAMS.

  Possible approval of changes to the Guidelines for
  California's Solar Electric Incentive Program (Senate Bill
  1). The changes in this third edition are of limited scope,
  to clarify the Guidelines.
- 12. UNIVERSITY OF CALIFORNIA, RIVERSIDE. Possible approval of Contract 500 09 051 for \$1.2 million with the Regents of the University of California, Riverside to conduct research and testing of various alternative motor fuel formulations for California's transportation fuel markets. (PIER natural gas funding.)

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- 13. LAWRENCE BERKELEY NATIONAL LABORATORY. Possible approval of \$6,750,000 for Amendment 2 to Contract 500-03-026 with Lawrence Berkeley National Laboratory Demand Research Center to continue developing methods to determine and communicate electric price information. The work from this amendment will demonstrate ways that different end users can manage loads automatically, and help coordinate the regulatory adjustments necessary to achieve the benefits of demand response. (PIER electricity funding.)
- 14. LAWRENCE BERKELEY NATIONAL LABORATORY. Possible approval of Contract 500-09-049 for \$3.4 million with Lawrence Berkeley National Laboratory to develop additional information on the relationship between ventilation and health, and performance and productivity in commercial buildings. This new information will be used to help establish new commercial building ventilation standards that balance energy efficiency objectives with the need to maintain acceptable indoor air quality. (PIER electricity funding.)
- 15. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

  Possible approval of Contract 500-09-047 for \$1,105,000 with the National Oceanic and Atmospheric Administration (NOAA) to research the potential effects of atmospheric rivers and airborne particles from man-made processes on precipitation in California. (PIER electricity funding.)
- 16. ONE CYCLE CONTROL. Possible approval of Grant Agreement PIR-09-020, awarding \$400,000 to One Cycle Control to demonstrate a 15-kilowatt peak load reduction system. This energy storage project, located in Newport Beach, is expected to reduce energy costs for industrial facilities. (PIER electricity funding.)
- 17. UNIVERSITY OF CALIFORNIA, DAVIS. Possible approval of
  Contract 500-09-050 for \$150,000 with the Regents of the
  University of California, Davis to demonstrate the use
  of a novel ultraviolet treatment system for wastewater
  disinfection that will reduce maintenance and energy costs.
  (PIER electricity funding.)

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18.	RENSSELAER POLYTECHNIC INSTITUTE. Possible approval of Contract 500-10 09-012 for \$60,000 for a one year membership in the Partners Program at Rensselaer Polytechnic Institute's Lighting Research Center (LRC). The membership will provide the Energy Commission with access to cutting edge lighting research and results, access to experts who can provide technical assistance on lighting questions, and the ability to network, collaborate in joint research and transfer PIER project results to other LRC partners. (PIER electricity funding.)	81
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- 2 June 23, 2010 10:03 a.m.
- 3 CHAIRPERSON DOUGLAS: Good morning. Welcome to the
- 4 California Energy Commission Business Meeting of June 23rd,
- 5 2010.
- 6 Please join me in the Pledge.
- 7 (Whereupon, the Pledge of Allegiance was
- 8 received in unison.)
- 9 CHAIRPERSON DOUGLAS: Beginning on Item 1, the
- 10 Consent Calendar, we have a request to move Items 1B, C, and
- 11 D, take them off consent and make them a discussion item.
- 12 So, Commissioners, we will begin with Item 1A of the Consent
- 13 Calendar.
- 14 COMMISSIONER BYRON: I move approval of the Consent
- 15 Calendar.
- 16 COMMISSIONER EGGERT: Second.
- 17 CHAIRPERSON DOUGLAS: All in favor?
- 18 (Ayes.)
- 19 Item 1A is approved. And now we will take up Item
- 20 1B, C and D. We have one member of the public who would like
- 21 to comment. Oh, I am reminded that, before we get into Item
- 22 B, C, and D, we have some guests here who probably do not
- 23 want to sit through the entire business meeting, so, before
- 24 we recognize them for their extraordinary efforts. So before
- 25 we get to the second part of the Consent Calendar, we have

- 1 invited State Controller's Office here and, also, our staff
- 2 who have worked on the California Cash for Appliances
- 3 Program, to recognize the Controller's Office for its
- 4 extraordinary efforts and partnership with the Energy
- 5 Commission and our own staff for their extraordinary efforts
- 6 to create out of nothing and nowhere this amazing program.
- 7 The California Energy Commission launched the
- 8 California Cash for Alliances Program on April 22<sup>nd</sup>, 2010, it
- 9 was Earth Day. It is a \$35 million rebate program for
- 10 appliances. Prior to the launch, the Energy Commission and
- 11 the State Controller's Office staffs worked diligently to
- 12 create this program from scratch, in less than six months.
- 13 And this is an unheard of timeframe for a program that was
- 14 anything but simple to put together. This effort required
- 15 the two staffs, the Energy Commission and the Controller's
- 16 Office, to work as one, to be innovated, be flexible, to meet
- 17 all State and Federal requirements, be transparent, and
- 18 ensure against waste, fraud and abuse.
- 19 The Controller's Office staff has done an
- 20 extraordinary job to ensure that the rebate processing,
- 21 validation, and payment process runs smoothly and efficiently
- 22 for the benefit of California consumers. Checks are going
- 23 out the door, consumers are receiving the rebates, and we are
- 24 tremendously pleased with the way this is going. We wanted
- 25 to ask them to come here today to express our appreciation

1	for their team attitude, high level of cooperation that we
2	have experienced with them, and their willingness to work
3	very hard to meet the aggressive timelines that this program
4	is under. So the Commission would like today to express
5	their thanks to the staffs of the Controller's Office and the
6	Energy Commission for the long hours, professionalism, and
7	dedication in ensuring that this Stimulus program is a
8	success. So what I have got here is a resolution for the
9	Controller's Office, and then a number of individual
10	resolutions for our staff and Controller's Office staff.
11	What I will do is read the large resolution, read the names
12	of the staff that are being recognized, and ask them to stand
13	up, and when everybody has stood up, when I have gone through
14	the list, to please come forward for a photo in front of the
15	dais. The resolution reads as follows:
16	"WHEREAS, staff of the State Controller's Office
17	has demonstrated an uncommon team work, an
18	interagency ethic as a partner of the California Cash
19	For Appliances Team; and
20	WHEREAS, staff of the State Controller's Office
21	contributed to establishing a brand new state program
22	in one-third the normal time, while demonstrating
23	exceptional professionalism and dedication; and
24	WHEREAS, staff of the State Controller's
25	Office's attention to detail and their thorough

1	implementation of duties has prevented fraud, waste,
2	and abuse in the California Cash For Appliances
3	Program; and
4	WHEREAS, staff of the State Controller's Office
5	has conducted themselves in an efficient and flexible
6	manner, allowing the state to expeditiously issue
7	rebate warrants in less than five days after they
8	have been validated; and
9	WHEREAS, staff of the State Controller's Office,
10	exemplifying an attitude of cooperation and exceptional
11	customer service to the California Energy Commission,
12	with a can-do attitude;
13	THEREFORE, BE IT RESOLVED, the California Energy
14	Commission commends and thanks the State Controller's
15	Office and its staff for working tirelessly on behalf
16	of the California Cash For Appliances Rebate Program
17	in the State of California."
18	So, thank you very much from the Commission, and I
19	would like to read off the names of Controller's Office staf:
20	now: Elizabeth Gonzalez - are you here? Thank you. Stella
21	Chin, Vance Hess, Dorothy Cottrill, Shirley Dong, Monte Hand,
22	Tim Johnson, Michael Yu, Lawrence Cheung, Erik Eid. That is
23	it, I understand. Did I miss anybody from the Controller's
24	Office team? Andy - Andrew Finlaysin? Oh, please, sorry
25	about that.

- 1 And on the Energy Commission staff, we have got
- 2 Lorraine White, our Program Manager, Peter Strait, Technical
- 3 Lead Appliances, Amy Morgan, Steve Bonta, Donna Green,
- 4 Melanie Moultry, Bob Aldrich, Rajaram Bondu, Renee Webster-
- 5 Hawkins, Gabe Herrera, Mark Jones, Paula David, Rachel Grant,
- 6 Michael Wilson, Olena Bilyk, and Jerome Lee. Thank you
- 7 again, this allows us all to see what it really takes.
- 8 [Applause] We have a photographer read, Adam? So, please
- 9 come forward and stand in front of the podium.
- 10 COMMISSIONER EGGERT: Can I just -
- 11 CHAIRPERSON DOUGLAS: Please.
- 12 COMMISSIONER EGGERT: Just a real quick I also
- 13 just wanted to express my thanks for your extraordinary
- 14 efforts. Having come into this program sort of right at the
- 15 implementation phase, it was actually quite remarkable how
- 16 quickly the team was able to adapt a system, changing
- 17 requirements, and actually on an ongoing basis, you know,
- 18 this program has continued to sort of adapt to be able to
- 19 deliver the best value to the State of California, the
- 20 residents of California. And I have actually heard it help
- 21 up as a model for other potential programs, including things,
- 22 for example, perhaps rebates for electrical vehicle charging;
- 23 sort of the combination of the website and the partner is a
- 24 really good model for future programs.
- 25 COMMISSIONER BYRON: As everyone is still

- 1 gathering, I will fill time. This really is the highlight
- 2 of the meeting, and I would like to thank you all personally,
- 3 very much, for your efforts on this program. It has been
- 4 very successful, and I think it is even going to be more
- 5 successful. So, thank you for your continued efforts, and
- 6 thank you for being here.
- 7 MS. CHANDLER: So this is the Cash For Appliances
- 8 Village.
- 9 CHAIRPERSON DOUGLAS: I would actually like to ask
- 10 Andy Finlaysin, if you could come forward and receive the
- 11 resolution?
- MR. FINLAYSIN: The State Controller's Office would
- 13 like to thank the Energy Commission for being a good,
- 14 efficient, well-oiled team also. Without you guys, it would
- 15 not have been pulled off, either. So we consider this a good
- 16 team effort and we were happy to participate in this
- 17 successful program. Thank you. [Applause]
- 18 CHAIRPERSON DOUGLAS: Thank you. Thanks for being
- 19 here. Very well, and with that note of appreciation, we
- 20 really do like to take the time at business meetings to
- 21 recognize our partners because, if we learn nothing else in
- 22 the experience of administering ARRA funding, it is that
- 23 there is so much that other state energies have to contribute
- 24 to this effort, and in this program and others, it really
- 25 just would not have happened without their help and support.

- 1 All right, now, Commissioners, we will move
- 2 forward to Items 1B, C, and D. Mr. Pennington.
- 3 MR. PENNINGTON: Commissioner Eggert, did you want
- 4 to lead this item?
- 5 COMMISSIONER EGGERT: Yeah, sure, I guess I could
- 6 just open it and then, if there are things that I might have
- 7 missed or additional questions, Mr. Pennington can chime in.
- 8 I guess, the purpose for pulling these from consent and
- 9 moving them to a discussion item is to allow for a period of
- 10 time in which the previous software can be made available, or
- 11 continue to be made available, to those organizations that
- 12 are using it for projects that are underway, or have already
- 13 gotten underway. So, rather than having sort of a hard stop,
- 14 shifting from the old to the new, we would be allowing an
- 15 overlap of about a month, so this would extend the
- 16 certification of the older versions out to July 31st. It is
- 17 not a delay of approval for the new ones, it is just an
- 18 extension of certification for the old, and we have received
- 19 previously comments from folks in the industry that this
- 20 would be very helpful for their operations. Is there
- 21 anything to add, Mr. -
- MR. PENNINGTON: No, that is very good. Thank you.
- CHAIRPERSON DOUGLAS: All right, we have a member
- 24 of the public who would like to speak. Bob Raymer.
- MR. RAYMER: Thank you, Madam Chair and

- 1 Commissioners. I am Bob Raymer, Senior Engineer and
- 2 Technical Director for the California Building Industry
- 3 Association. And I would just like to indicate our support
- 4 for the approval of both MICROPAS 8.1, Energy Pro 5.1, and we
- 5 would also like to support the decertification of the
- 6 previous versions on July  $31^{\rm st}$ . Given the technical
- 7 complexities of these programs and the interaction, the
- 8 numerous algorithms without these programs -- and there are a
- 9 great many -- it has come to be expected over these many
- 10 years that bugs will pop up on occasion and need to be
- 11 addressed. I am sure that the vendors have burned the
- 12 midnight oil trying to get this up and running on time,
- 13 however, when you consider the fact that approximately 98
- 14 percent of all new homes in California use one of these
- 15 programs as the chosen method of compliance, you begin to see
- 16 just how important it is for industry and the design
- 17 community to have access to these certified programs at least
- 18 six to nine months in advance. And we will be doing
- 19 everything we can in working with the Energy Commission as we
- 20 develop the next set of regulations to make sure that we do
- 21 have access to these certified programs well in advance of
- 22 the effective date. So, once again, thank you very much for
- 23 this.
- CHAIRPERSON DOUGLAS: Thank you. And so,
- 25 Commissioner Eggert, maybe you could describe, or you could

- 1 say explicitly what you are suggesting, what changes you
- 2 suggest we make to Items B and C.
- 3 COMMISSIONER EGGERT: Yeah, so, again, thank you,
- 4 Mr. Raymer for your input on this item. So the specific
- 5 recommendation is to modify the date where it says this
- 6 action includes the decertification of Energy Pro 5.0 for
- 7 Item B, which has an interim approval until June 30<sup>th</sup>, to
- 8 modify that to extend it to July  $31^{st}$ .
- 9 CHAIRPERSON DOUGLAS: July 31<sup>st</sup>, 2010.
- 10 COMMISSIONER EGGERT: Yeah.
- 11 CHAIRPERSON DOUGLAS: And is it the same change in
- 12 Item C, then, extended that date to July  $31^{st}$ , 2010?
- 13 COMMISSIONER EGGERT: That is correct.
- 14 CHAIRPERSON DOUGLAS: All right. And are there any
- 15 changes that you would like us to consider for Item 1D?
- 16 COMMISSIONER EGGERT: As I understand, even though
- 17 it does not expressly reference it here in this summary, I
- 18 believe that, in the extended discussion, it also talks about
- 19 a June 30<sup>th</sup> date, as well, so we would be extended that to
- 20 July  $31^{st}$ .
- 21 CHAIRPERSON DOUGLAS: All right, so we will
- 22 explicitly be extended that to July 31<sup>st</sup>, in Item 1D. Are
- 23 there any questions or other comments from Commissioners?
- 24 COMMISSIONER BYRON: None.
- 25 CHAIRPERSON DOUGLAS: All right, do we have a

- 1 motion?
- 2 COMMISSIONER EGGERT: I will move the item.
- 3 COMMISSIONER BYRON: And I will second it.
- 4 CHAIRPERSON DOUGLAS: All in favor?
- 5 (Ayes.)
- 6 Item 1B, C and D are approved as amended. Thank
- 7 you.
- 8 COMMISSIONER BYRON: Mr. Raymer, thank you for
- 9 being here today, very helpful.
- 10 CHAIRPERSON DOUGLAS: Item 2. Sacramento Municipal
- 11 Utility District. Possible approval of Contract 400-09-023
- 12 for \$19,969,421 with Sacramento Municipal Utility District to
- develop and deliver a program for energy efficiency audits
- 14 and home performance retrofits in the Sacramento region. Ms.
- 15 Lam.
- MS. LAM: Good morning, Chairman Douglas and
- 17 Commissioners. I am Helen Lam in the Efficiency and
- 18 Renewables Division.
- 19 COMMISSIONER BYRON: Ms. Lam, is your microphone
- 20 on?
- 21 MS. LAM: Okay, I think this should work better.
- 22 The SMUD contract before you today is the  $11^{\rm th}$  of 12 SEP 110
- 23 contracts to come before the Commission for approval. With
- 24 its approval, the Commission will have approved all four SEP
- 25 funded residential retrofit program contracts. This is a

- 1 request for the approval of a contract for approximately
- 2 \$19.97 million in ARRA funds to implement and deliver a
- 3 multi-component home performance program in the Sacramento
- 4 region, including the Cities of Rancho Cordova, Citrus
- 5 Heights, Elk Grove, Folsom, and Galt. SMUD and its partners
- 6 will provide approximately \$27.7 million in leveraged
- 7 funding. This amount does not include any anticipated
- 8 program incentives by the investor-owned utilities of the
- 9 portion of the retrofit costs to be paid for by the
- 10 participating homeowners. If included, however, then the
- 11 total leveraged funding in both public and private funds will
- 12 come to a total of \$69.2 million.
- 13 This program will provide HERS 2 audits and/or home
- 14 performance retrofits to 15,150 single-family and multi-
- 15 family homes in the region. In addition to the Tier 1, 2 and
- 16 3 approaches under California Comprehensive Residential
- 17 Building Retrofit Program, Home Performance will leverage
- 18 \$8.8 million from the Sacramento Housing and Redevelopment
- 19 Agency through DOE's Neighborhood Stabilization Program
- 20 Grant, and \$1.5 million from the Community Resource Project
- 21 through Weatherization Funding, to make energy efficiency
- 22 retrofits to the homes of low and moderate low income
- 23 Sacramento residents. The program will develop a training
- 24 partnership with the Sacramento Employment Training Agency
- 25 and the Los Rios Community College District to train

- 1 contractors in auditing and building performance science.
- 2 Residential training and certification will conform to the
- 3 National Home Performance with Energy Star Program
- 4 Guidelines, Building Performance Institute Standards, and
- 5 HERS 2 requirements. With the leverage of \$600,000 from
- 6 Council Through America Cooperative Agreement with the
- 7 Department of Energy Home Performance for Neighborhood will
- 8 deliver both a proscriptive approach and a performance-based
- 9 approach to retrofit homes and target neighborhoods in
- 10 Sacramento. The Home Performance for Multi-Family will pilot
- 11 a comprehensive multi-family retrofit model, which achieves
- 12 an initial 20 percent savings and provides a blueprint to
- 13 obtain up to 40 percent savings through a multi-year
- 14 investment plan. The program will develop a sophisticated
- 15 marketing program, founded on SMUD customer research to
- 16 foster ongoing awareness, education, consideration, and
- 17 participation in all levels of the Home Performance Program.
- 18 In parallel with the program, a property tax base AB 811
- 19 financing program will be implemented in the region to
- 20 facilitate Home Performance Program participation.
- 21 SMUD estimates the program will create 1,148 jobs
- 22 based on Department of Energy's provider formula and save 22
- 23 gigawatt hours of electricity and 1.2 million Therms of gas
- 24 savings per year. Based on these estimated energy savings,
- 25 the program is expected to reduce greenhouse gas emissions by

- 1 16,756 tons of  $CO_2$  equivalent annually.
- 2 I request your approval of this contract with SMUD.
- 3 MS. JONES: And I would just like to clarify the
- 4 amount for the record. The contract is for \$19,969,421.
- 5 Thank you.
- 6 CHAIRPERSON DOUGLAS: Thank you. Questions or
- 7 comments, Commissioners?
- 8 COMMISSIONER BYRON: I was trying to do some quick
- 9 math here on my calculator. Ms. Lam, this is an
- 10 extraordinary project. I do not have the other three in
- 11 front of me that we have already approved for comparison, but
- 12 what is not to like about this project? I think we need to
- 13 give credit where credit is due, all the participants in this
- 14 and I understand that this was clearly the top contract in
- 15 your evaluation in response to the request for proposals. Is
- 16 that correct?
- MS. LAM: That is correct and, also, this is the
- 18 largest dollar amount.
- 19 COMMISSIONER BYRON: You know, SMUD just continues
- 20 to show us innovative management and serving the needs of
- 21 their customers. This is a great example of the kinds of
- 22 projects that I think serve the community so well. I do not
- 23 know where to even begin in terms of its benefits. So a
- 24 couple of questions if I may.
- MS. LAM: Sure.

- 1 COMMISSIONER BYRON: Will there be a way of
- 2 measuring these projected savings? I mean, 20 percent
- 3 initial savings is extraordinary. I was trying to do some
- 4 calculations while you were speaking. Is there a way to
- 5 measure this in terms of, indeed, the net effect that this
- 6 will have on a household basis? And also, is there a way to
- 7 measure afterwards if this will improve the sale of these
- 8 homes?
- 9 MS. LAM: Well, in terms of QA process for the
- 10 multi-family, the 20 percent savings, obviously the
- 11 augmentation to the HERS 2 rating tools will need to be
- 12 implemented in order to calculate a savings.
- 13 COMMISSIONER BYRON: All right, we will take care
- 14 of that.
- MS. LAM: Yes. So they will have testing and test
- 16 out requirements, so you go in and basically get the baseline
- 17 energy features of the home, come up with a list of
- 18 recommendations for the retrofits, and then, once
- 19 implementation is completed, then a HERS 2 Auditor will go in
- 20 and do the post-retrofit evaluation to determine the
- 21 percentage of savings.
- 22 COMMISSIONER BYRON: And I am sure that that will
- 23 be satisfactory and successful, but when these homes are
- 24 sold, or put back into the market, is there any way to
- 25 evaluate if it improved their sale value? You know, that

- 1 they moved faster than other homes, if you will? Because
- 2 what we are interested in here is obviously setting an
- 3 example, a demonstration that is this large could have a
- 4 significant impact on consumer attitude towards energy
- 5 efficiency in the purchase of their home.
- 6 MS. LAM: Absolutely. And then that is why they
- 7 will have an aggressive marketing campaign to educate the
- 8 consumers about the benefits of energy efficiency upgrades,
- 9 and I think that people are getting the message, but we still
- 10 need a lot of work out there to educate the consumers as to
- 11 what home energy audits will do for them, you know, how they
- 12 can live in the home more comfortably, and then also save on
- 13 their energy bills each month.
- 14 COMMISSIONER BYRON: Well, thank you and everyone
- 15 involved in this project for bringing us such an excellent
- 16 project. I am certainly in favor of it.
- 17 CHAIRPERSON DOUGLAS: Thank you, Commissioner. I
- 18 realized I have a card from a member of the public. I would
- 19 like to ask Vince Sugrue to come forward, please, Sheet Metal
- 20 Workers Local 104.
- 21 MR. SUGRUE: Thank you, Madam Chair and the
- 22 Commission. I am an intern at 104, this is my first time
- 23 here, and this is a really fun meeting, so thank you. So,
- 24 essentially, SMACNA and Sheet Metal Workers 104 would like to
- 25 really support this paper and, yeah, one of the main things

- 1 we would like to stress is the workforce and facility
- 2 development training, we think that is very important because
- 3 the Sheet Metal Workers 104 has four facilities throughout
- 4 the Valley, and it is very important to support such a thing.
- 5 Also, Mr. Byron, what you said, there is nothing to not like
- 6 about this; it is a very strong project. Finally, we would
- 7 like to compliment on implementing the Davis-Bacon Act, which
- 8 discusses the prevailing wage and such, so, thank you.
- 9 COMMISSIONER BYRON: Mr. Sugrue, I have always
- 10 understood an intern to be a euphemism for someone that is
- 11 not paid, I hope you are paid.
- MR. SUGRUE: Actually, I am.
- 13 COMMISSIONER BYRON: Good.
- MR. SUGRUE: But this is fun.
- 15 COMMISSIONER BYRON: Thank you for coming.
- 16 CHAIRPERSON DOUGLAS: Thank you so much for being
- 17 here. Commissioner Eggert.
- 18 COMMISSIONER EGGERT: Thank you, Madam Chair. I
- 19 want to echo, I mean, this is a program that does have it
- 20 all, and I think that is why it really sort of floated to the
- 21 top in the evaluation of all the projects that were
- 22 considered. You know, it links workforce development; it
- 23 starts to implement our auditing program. But, actually, I
- 24 did have a question related to Commissioner Byron's question.

- 1 Does this include providing the rating to the MLS Listing
- 2 for the real estate?
- 3 MS. LAM: That is what is planned for, so the
- 4 contractor, SMUD, will be working with the real estate
- 5 community to incorporate the HERS information into the MLS.
- 6 COMMISSIONER EGGERT: Excellent, so this will be,
- 7 Commissioner Byron, this will be one mechanism by which
- 8 consumers, people looking to purchase the house, will start
- 9 to be able to have that information through the real estate
- 10 listings, to be able to have information about the
- 11 efficiency of the building. I think, also, the fact that
- 12 this includes some pilot activities on multi-family and,
- 13 again, yeah, these savings estimates are really quite
- 14 impressive and it will be interesting to see how well they
- 15 are able to achieve that. The leverage is tremendous, so I
- 16 think this is going to be enormously useful to testing a lot
- 17 of the different elements of what we think we are going to
- 18 need to have a successful roll-out of AB 758, which I know
- 19 is a new rulemaking that is just getting underway this year.
- 20 So, looking forward to the project and I think it is a great
- 21 testament of what we can do, and we think creatively, and we
- 22 really challenge the folks out there to come up with
- 23 innovative programs.
- 24 CHAIRPERSON DOUGLAS: Thank you, Commissioner.
- 25 And I would also like to thank staff for its hard work and

- 1 SMUD and the many partners who put this proposal together
- 2 because it is a very exciting proposal. A motion?
- 3 COMMISSONER EGGERT: I will move the item.
- 4 COMMISSIONER BYRON: Second.
- 5 CHAIRPERSON DOUGLAS: All in favor?
- 6 (Ayes.)
- 7 Item 2 is approved. Thank you, Ms. Lam.
- 8 MS. LAM: Thank you very much.
- 9 CHAIRPERSON DOUGLAS: Item 3. California
- 10 Alternative Energy and Advanced Transportation Financing
- 11 Authority. Possible approval of Contract 600-09-013 with
- 12 the California Alternative Energy and Advanced
- 13 Transportation Financing Authority (CAEATFA) to reduce the
- 14 amount funded from \$100 million to \$51 million. Mr.
- 15 Rillera.
- MR. RILLERA: Good morning, Chairman and
- 17 Commissioners. Larry Rillera with the Fuels and
- 18 Transportation Division. Staff is seeking approval of two
- 19 separate actions today with respect to AB 118 financing
- 20 assistance through the State Treasurer's Office. Over the
- 21 past year, staff has been working with the State Treasurer's
- 22 Office to provide financing assistance and program
- 23 administration. The Treasurer's Office would do this
- 24 primarily through the California Alternative Energy and
- 25 Advanced Transportation Financing Authority, otherwise known

- 1 as CAEATFA. CAEATFA has requisite authority and expertise
- 2 that enable eligible AB 118 participants to participate in
- 3 various funding programs and financing programs. This
- 4 financing is consistent with the objectives of the AB 118
- 5 program and the Investment Plan.
- 6 On April 6<sup>th</sup>, 2010, the CAEATFA Board approved a
- 7 Master Interagency Agreement with the California Energy
- 8 Commission to establish the basis for this financing
- 9 program. On April 7<sup>th</sup>, 2010, the Commission approved the
- 10 Master Interagency Agreement; however, the Master
- 11 Interagency Agreement has not been fully executed. CAEATFA
- 12 has undergone significant organizational changes and has
- 13 recently been tasked with leadership responsibilities for
- 14 two new state policies that have essentially rendered the
- 15 use of the Master Interagency Agreement less useful than was
- 16 originally conceived. As a result, staff for CAEATFA and
- 17 the Energy Commission have collaboratively developed a Plan
- 18 B. Plan B would accelerate the development of separate
- 19 agreements under the State Treasurer's Office to provide
- 20 financing assistance to support eligible AB 118 participants
- 21 for recently issued solicitations.
- 22 Staff seeks Commission approval on Item 3 to
- 23 reduce the funds in the Master Interagency Agreement from
- 24 \$100 million to \$51 million. Forty-nine million dollars
- 25 would be used to fund two separate agreements with the State

- 1 Treasurer's Office. Staff also seeks Commission approval
- 2 on a second Action Item, Item 4, to approve an agreement
- 3 with CAEATFA, to provide financing assistance for the
- 4 California Producer Incentive Program. Staff would ask the
- 5 Commission support to approve Item 3 to reduce the amount
- 6 funded in the agreement 600-09-013 from \$100 million to \$51
- 7 million.
- 8 CHAIRPERSON DOUGLAS: Thank you, Mr. Rillera and
- 9 thank you for the detailed explanation of what is going on
- 10 with the structure of this agreement. Commissioners, do you
- 11 have questions or comments?
- 12 COMMISSIONER BYRON: I have an arithmetic
- 13 question. I am reading from the material that was provided
- 14 me in the memo from June 14<sup>th</sup>, so please allow me to get to
- 15 my question. it says, "Of this amount," of the \$49 million,
- 16 "...\$6 million will be initially transferred to the CEPIP, and
- 17 there will be provisions," I believe that was Phase 1A,
- 18 "...and there will be provisions that will authorize the
- 19 subsequent allocation up to \$9 million." So we get to \$15
- 20 million, and then the next item? Is that correct?
- 21 MR. RILLERA: Yes, Commissioner.
- 22 COMMISSIONER BYRON: So why are we calling out
- 23 these two separate amounts here? I am not sure I am
- 24 following the reason for -
- MS. JONES: The original contract was an "up to"

- 1 \$100 million, of which we had planned to spend about \$40 in
- 2 this fiscal year, so the disencumbrance [sic] is for that
- 3 difference there, and what we are encumbering into Item 4
- 4 is, again, "up to" \$15 million.
- 5 COMMISSIONER BYRON: Okay, and did you say
- 6 "disencumbering?"
- 7 MS. JONES: Yes.
- 8 COMMISSIONER BYRON: Is that a word?
- 9 MS. JONES: I heard finance people use it, so....
- 10 COMMISSIONER BYRON: So, disencumber should be -
- 11 we are cumbering these funds, then?
- MS. JONES: We are disencumbering and then re-
- 13 encumbering.
- 14 COMMISSIONER BYRON: All right, thank you.
- 15 COMMISSIONER EGGERT: And I guess, actually, just
- 16 maybe for further clarification, as I understand it, you
- 17 might even consider, in other parlance, the 15 is sort of
- 18 the authorization and the 6 is the actual appropriation, so
- 19 the \$6 million is sort of real dollars, the "up to \$15" is
- 20 sort of what the interagency would be authorize to expend,
- 21 and then that will be discussed in Item 4 in more detail.
- 22 Is that right?
- MR. RILLERA: Yes, Commissioner.
- COMMISSIONER BYRON: Madam Chair, I am prepared to
- 25 move the item. I move Item 3 for Commission approval.

- 1 COMMISSIONER EGGERT: Second.
- 2 CHAIRPERSON DOUGLAS: All in favor?
- $3 mtext{(Ayes.)}$
- 4 Item 3 is approved. Mr. Rillera, Item 4.
- 5 California Alternative Energy And Advanced Transportation
- 6 Financing Authority. Possible approval of Contract 600-09-
- 7 017 for up to \$15 million.
- 8 MR. RILLERA: Over the past year, staff has been
- 9 working with the Treasurer's Office to provide financing
- 10 assistance for eligible AB 118 participants. Item 3, just
- 11 discussed, would reduce funding in the original agreement
- 12 from \$100 million down to \$51 million. Staff would ask for
- 13 the Commission's support to approve Item 4, to approve an
- 14 Interagency Agreement with CAEATFA, to provide financing
- 15 assistance for the California Producer Incentive Program.
- 16 Six million dollars would be encumbered in this Interagency
- 17 Agreement, initially.
- 18 CHAIRPERSON DOUGLAS: Thank you. I think we have
- 19 already discussed this one. Any additional questions or
- 20 comments?
- 21 COMMISSIONER BYRON: Madam Chair, I move approval
- 22 of Item 4.
- 23 COMMISSIONER EGGERT: Second.
- 24 CHAIRPERSON DOUGLAS: All in favor?
- 25 (Ayes.)

- 1 Item 4 is approved. Thank you.
- 2 Item 5. Electric Transportation Engineering
- 3 Corporation. Possible approval of Grant Agreement
- 4 ARV-09-005, awarding \$8 million to Electric Transportation
- 5 Engineering Corporation for the Nissan Electric Drive
- 6 Vehicle Demonstration and Vehicle Infrastructure project.
- 7 Ms. Allen.
- 8 MS. ALLEN: Good morning, Chairman Douglas and
- 9 Commissioners. The next three projects that are listed, 5,
- 10 6 and 7, are the result of Program Opportunity Notice 08-010
- 11 that was issued to seek projects that were going for
- 12 American Recovery and Reinvestment Act dollars, and the
- 13 Energy Commission provided Letters of Intent and then funded
- 14 the projects that were successful at the Federal level, so
- 15 this first one was successful with the Transportation
- 16 Electrification solicitation, and this is with Electric
- 17 Transportation Engineering Corporation. We are seeking
- 18 approval to enter into an agreement with them for \$8
- 19 million. This would provide the infrastructure support for
- 20 the Nissan Leaf rollout in the San Diego area, and so we
- 21 would be providing 1,000 home chargers up to 1,300
- 22 commercial chargers, and then there would be 60 direct
- 23 charge units that would be placed on the corridors between
- 24 the San Diego area and the Los Angeles area. Since we
- 25 started working on this project, developing the agreement

- 1 with this project, we found out that the Department of
- 2 Energy has provided additional dollars to expand this
- 3 program to Los Angeles, so there will also be a rollout
- 4 associated for the Los Angeles area, so this project will
- 5 also the direct chargers in the corridors between Los
- 6 Angeles and San Diego will also be going to support the
- 7 rollout of vehicles in the Los Angeles area. The commercial
- 8 and the direct charge units will also be supporting the
- 9 proposed rollout of an additional 5,000 vehicles within the
- 10 next three years. So staff recommends funding.
- 11 There is a leverage of funding for just the San
- 12 Diego area, we are leveraging about \$39.4 million from the
- 13 U.S. Department of Energy in ARRA funding, and then we are
- 14 also leveraging a private match of \$32.6 million.
- 15 CHAIRPERSON DOUGLAS: Thank you, Ms. Allen, and
- 16 those are obviously really impressive leverage numbers.
- 17 Commissioner Eggert?
- 18 COMMISSIONER EGGERT: Sure, just a couple of
- 19 comments. I am glad you pointed out the leverage. I think
- 20 this is definitely one of the success stories of our efforts
- 21 to use our 118 money to leverage both private and federal
- 22 dollars, and you know, the fact that we were able to turn \$8
- 23 million into what is approximately about \$80 million is
- 24 that right? Almost. A 10:1 leverage if really quite
- 25 tremendous, and I think the fact that they are now expanding

- 1 this program to Los Angeles, which I think is fairly recent
- 2 news, is going to be a great demonstration of electric
- 3 vehicle infrastructure in the vehicles that will actually
- 4 utilize this. I will say, I actually had a good
- 5 conversation with one of the program leads from ETEC and
- 6 they are looking forward to working with us to make sure
- 7 that this infrastructure is rolled out in a strategic manner
- 8 that matches the needs of the customers, so for the regions
- 9 and the consumers that are buying these vehicles, there are
- 10 components of both home charging, public charging, different
- 11 types of public charging destinations, different levels,
- 12 including the fast charging. So I think we are going to
- 13 learn a tremendous amount about the needs for
- 14 infrastructure, the way that consumers use that
- 15 infrastructure, and that is going to really sort of inform
- 16 future activities under the 118 program as it relates to EV
- 17 infrastructure in the state. So very much looking forward
- 18 to seeing this program as it rolls out, and I think we have
- 19 got an excellent example of a project here that we have been
- 20 able to turn the 118 dollars into quite a bit more than we
- 21 would have been able to do on our own.
- MS. ALLEN: Yes, and if the preliminary interest
- 23 in these vehicles is any indication, these chargers will
- 24 have quite an extensive use both between Los Angeles and San
- 25 Diego and the San Diego area.

l COMMISSIONER EGGERT: Yeah, the other impress		COMMISSIONER	EGGERT:	Yeah,	the	other	impress
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- 2 aspect of this is the level of data collection that is being
- 3 applied, both on the vehicle side and on the charger side,
- 4 is going to be substantial. We are going to know when they
- 5 charge, how much use they take, we will be able to match
- 6 that against individual consumers who will understand the
- 7 behavior more precisely, so they are going to guide future
- 8 investments.
- 9 MS. ALLEN: Yes. One of the important things
- 10 about this project is that the home chargers will also be
- 11 Smart Chargers, so they will have all of the additional
- 12 features that will allow the utility control and data
- 13 collection for time of use, or for the ability to either
- 14 diminish the charge, or to turn it off altogether if there
- 15 is a need to do so, and then to bring it back up again. So
- 16 the chargers that are put in by Nissan, were Nissan to be
- 17 the ones to use their chargers associated with the vehicles,
- 18 those are not Smart Chargers and do not have that ability.
- 19 COMMISSIONER BYRON: Excellent. This last
- 20 discussion helps answer a couple of my questions. I think I
- 21 have got one last question, and that is that is good, that
- 22 is very helpful, but I think you indicated there is up to 60
- 23 corridor charges, as well.
- MS. ALLEN: Yes, correct.
- 25 COMMISSIONER BYRON: That is always a curious

- 1 question to me. Who pays for the electricity on those?
- MS. ALLEN: Right now, they will be offered for -
- 3 I think with the preliminary project, they will be offered
- 4 as a service by the property owner.
- 5 COMMISSIONER BYRON: Meaning it will be free?
- 6 MS. ALLEN: Meaning it will be free, yes.
- 7 COMMISSIONER BYRON: That is kind of the way the
- 8 commercial charges will be, as well?
- 9 MS. ALLEN: Yes, correct.
- 10 COMMISSIONER BYRON: People drive their cars up
- 11 and plug them in?
- MS. ALLEN: Yes. And for the 1,300 commercial
- 13 charges, that is actually an advantage to the property owner
- 14 because, if they can, for example, at a shopping mall, if
- 15 they can get the customer to stay there for a little bit
- 16 longer, whatever they gain from the cost of the electricity,
- 17 they figure they make up in additional sales by the
- 18 additional time stayed at the site.
- 19 COMMISSIONER BYRON: Yeah, interesting side
- 20 effects to all of this. But I am concerned about how this
- 21 affects consumer behavior, as well, you know, the notion
- 22 that electricity is free, and it does not matter when you
- 23 plug it in, if you are going shopping in the middle of the
- 24 day, and you are using energy at the times when I should
- 25 say, you are using energy to charge a vehicle at the time of

- 1 day when it may be the most expensive, actually. So,
- 2 consumer behavior issues are very important here, it is not
- 3 a knock on the project at all, I am very keen on the
- 4 project, but I just want to be conscious of the fact that we
- 5 want to make sure we capture consumer behavior and influence
- 6 it in a way that we are trying to modify the behavior such
- 7 that people understand electricity is not free. We are
- 8 trying to move these things to be charging during off-peak
- 9 hours. Commissioner Eggert, I suspect, wants to add to
- 10 this.
- 11 COMMISSIONER EGGERT: I think you are right. And
- 12 I think we are going to see a variety of different business
- 13 models that will emerge from some of these demonstration
- 14 activities. Somewhere there will be basically the charging
- 15 providing as an enticement to consumers, to bring them in.
- 16 Of course, the owner of the infrastructure will still have
- 17 to pay, so it will be made up for in the cost of your latte
- 18 or some other thing that is being sold by that particular
- 19 company. The utilities are a really strong partner in this
- 20 program, SDG&E and Sempra, and they are extremely interested
- 21 in those exact same questions because I think, for purposes
- 22 of improving the grid reliability and efficiency, they are
- 23 interested in how to move people towards off-peak charging,
- 24 and the fact that these are sort of smart chargers that are
- 25 being deployed, having some level of control, this has the

- 1 ability to be a scheduled load for them to be able to make
- 2 better use of their generating capital, including
- 3 intermittent renewables. So I think those elements of this
- 4 program are going to be ones that we are going to want to
- 5 look at quite closely.
- 6 COMMISSIONER BYRON: Yeah, hats off to San Diego
- 7 Gas & Electric, I have seen some recent presentations by
- 8 executives, they fully understand the opportunity here with
- 9 consumers and also the potential impact this could have on
- 10 the system, but they are, let's say, preparing for the
- 11 onslaught of electric vehicles, and it does represent a
- 12 challenge to grid operators. But that is really a side
- 13 issue to what we are talking about here today. I think this
- 14 is a very good project and I am very much in favor of it.
- 15 CHAIRPERSON DOUGLAS: I would just like to add,
- 16 this has been a great discussion. I am excited to see this
- 17 investment in new infrastructure and I am looking forward to
- 18 seeing a map and public information becoming available for
- 19 what this charging infrastructure looks like, and where it
- 20 will be concentrated. I think, obviously, we are trying to
- 21 get sufficient infrastructure out on time to match with
- 22 vehicle rollouts so that, when consumers consider buying an
- 23 electric vehicle, they will know that if they cannot make it
- 24 back to their home charger, and because they are going out
- 25 on a long trip, or because they are doing extra errands,

- 1 whatever it may be, that they have options for charging to
- 2 get back home. So, having this investment made and the
- 3 information available for where to charge is going to be
- 4 important and very helpful in this market. I am also
- 5 tremendously pleased at the leverage and tremendously
- 6 pleased at the way this is allowing us to invest in our
- 7 infrastructure at a time like this, and I think this is
- 8 really going to help move this forward in a lot of ways.
- 9 COMMISSIONER EGGERT: I would like to move the
- 10 item.
- 11 COMMISSONER BYRON: Second.
- 12 CHAIRPERSON DOUGLAS: All in favor?
- 13 (Ayes.)
- 14 This item is approved.
- 15 Item 6. Coulomb Technologies. Possible approval
- of Grant Agreement ARV-09-007, awarding \$3,417,000 to
- 17 Coulomb Technologies to provide 1,667 networked electric
- 18 vehicle charging stations to the San Francisco, Sacramento
- 19 and Los Angeles regions. Ms. Allen.
- 20 MS. ALLEN: This project was also funded through
- 21 the Transportation and Electrification solicitation from
- 22 Department of Energy. This will be new chargers that will
- 23 be installed in the three areas that were identified, San
- 24 Francisco, Sacramento, and Los Angeles. They will be
- 25 working in conjunction with the other projects that are

- 1 dealing with electric vehicle infrastructure installations,
- 2 so we will be working very closely with this company to make
- 3 sure that these stations are sited properly and in response
- 4 to where the vehicles are and vehicle rollouts, and
- 5 additional charging infrastructure projects that are ongoing
- 6 within the same area. And this has a match of \$3.354
- 7 million from American Recovery and Reinvestment Act funds,
- 8 and then there is an additional private match from Coulomb
- 9 of \$508,000 for this project.
- 10 CHAIRPERSON DOUGLAS: Thank you. Questions,
- 11 Commissioners?
- MS. ALLEN: These are also Smart Chargers, so
- 13 these will all have the ability to be controlled or to come
- 14 up with some kind of payment mechanism from the utility
- 15 areas.
- 16 COMMISSIONER EGGERT: So I quess just a quick
- 17 comment. You know, the fact that, for this effort, we have
- 18 basically the beginning of a good network being established
- 19 in Northern California, the previous program obviously
- 20 focused on San Diego and L.A., and I note I am trying to
- 21 remember if we have another significant infrastructure
- 22 project through Clipper Creek.
- MS. ALLEN: Yes. That is strictly upgrades.
- COMMISSIONER EGGERT: Yeah, so that actually will
- 25 take advantage of all the previous infrastructure that was

- 1 available throughout the last, I guess, things that have
- 2 been installed over the last 20 years, basically to upgrade
- 3 those to the most modern standards. So, we should be in a
- 4 really great position to be a leader in the deployment of
- 5 these vehicles because we have sort of been out front in
- 6 creating the infrastructure to enable that deployment. So
- 7 this is, again, another great program, great leveraging, and
- 8 it is matched with some of the auto makers that are planning
- 9 on bringing these vehicles to the state. So it is a good
- 10 design.
- 11 COMMISSIONER BYRON: I was not aware of the
- 12 matched funding from the information provided earlier, that
- 13 is excellent to hear. Will these charging stations the
- 14 material indicates the utilities will have the opportunity
- 15 to monitor and control peak usage times will these have
- 16 the same control and monitoring capabilities that you
- 17 discussed in the Southern California installations?
- MS. ALLEN: Yes, Coulomb Technologies, their
- 19 charging infrastructure system has the very sophisticated
- 20 Smart Chargers associated with it, so it will also have the
- 21 mechanism put into place that, should we work out the
- 22 details of actually being able to get charged back to your
- 23 own utility district, regardless of where you are charging,
- 24 it will have the ability. There is data collection
- 25 capabilities with these chargers, these are very

- 1 sophisticated chargers.
- 2 COMMISSIONER BYRON: Excellent. I think that is
- 3 the path we need to head down, the same path the cell phone
- 4 industry figured out a long time ago, how to bill customers.
- 5 Madam Chair, I am prepared to move the item.
- 6 COMMISSIONER EGGERT: Second.
- 7 CHAIRPERSON DOUGLAS: All in favor?
- 8 (Ayes.)
- 9 This item is approved.
- 10 Item 7. Department Of General Services. Possible
- 11 approval of Grant Agreement ARV-09-006, awarding \$4 million
- 12 to the Department of General Services, in partnership with
- 13 Propel Fuels, to build 75 ethanol (E85) dispensers at
- 14 publicly accessible fueling stations throughout California.
- 15 Ms. Allen.
- MS. ALLEN: This project will be through the
- 17 Department of General Services, but the primary
- 18 subcontractor to do the work will be Propel Fuels, and they
- 19 have identified 75 public fueling sites that they will be
- 20 installing E85 dispensers, and these will be throughout
- 21 California. And this was funded under the Clean Cities
- 22 solicitation of Department of Energy, and Department of
- 23 Energy is going to be providing -- for our \$4 million, they
- 24 will be providing \$6.917 million, and this has a very large
- 25 private investment of \$16.26 million for these dispensers.

- 1 Propel has a very interesting business model for their E85
- 2 dispensers, they actually cannot do multi-fuel stations,
- 3 they choose existing gasoline and diesel stations to put
- 4 their dispensers in, so that they do not have to do any
- 5 groundbreaking, so that the infrastructure that they need
- 6 for their system is already in place, and their dispensers
- 7 have the capability for data collection. And then we also
- 8 have, as a business model, they have a very strong education
- 9 portion to their business model in getting the word out to
- 10 people that have fuel flexible vehicles, that E85 is
- 11 available where it is available, and how to use it.
- 12 CHAIRPERSON DOUGLAS: Great, thank you. And,
- 13 again, I see another really good leverage number, so -
- MS. ALLEN: Yes, very good leverage numbers on
- 15 this one.
- 16 CHAIRPERSON DOUGLAS: Comments or questions,
- 17 Commissioners?
- 18 COMMISSIONER BYRON: Well, of course, after
- 19 talking about the electrical charging station, these are not
- 20 quite as romantic and interesting, but nevertheless, this is
- 21 a good thing to see, seeing how few E85 stations we
- 22 currently have in California. It is difficult and I did
- 23 not know about the co-funding, as well, that is no, there
- 24 it is, I am sorry, I missed it on this one. But, by my
- 25 math, if I were to just do simple add up the dollars and

- 1 divide by 75 stations, it is a third of a million dollars
- 2 per station. Is that about right?
- 3 MS. ALLEN: Yes.
- 4 COMMISSIONER BYRON: And I know there is a lot
- 5 more in there than just installing these, but that is a
- 6 pretty significant cost associated with these installations.
- 7 Am I understanding that correctly?
- 8 MS. ALLEN: Well, that also includes the education
- 9 portion and all of the other things that go along with the
- 10 data collection, and these are stations that are they
- 11 extend the canopy of existing fueling stations, so that it
- 12 appears to be all one integrated, you are not going to a
- 13 separate area at a gasoline station to do your E85 fueling.
- 14 COMMISSIONER BYRON: Understood. Well, and so
- 15 that does represent perhaps the full cost associated with
- 16 making these kinds of transitions.
- MS. ALLEN: Right.
- 18 COMMISSIONER BYRON: It might also explain why
- 19 there are so few E85 refueling stations at this point, but
- 20 this is a good addition.
- 21 COMMISSIONER EGGERT: Again, I just wanted to
- 22 point out, too, that there is a commitment from Propel to
- 23 optimize and use the fuel and feedstock from California,
- 24 including I think even trying to pursue the second and third
- 25 generation biofuels when they become available, like the

- 1 cellulosic ethanols. And so that is going to help us meet
- 2 our goals for in-state bioenergy and biofuel production. I
- 3 was going to wait until the end to mention this, but I did
- 4 want to say there was a summit that was held last week that
- 5 the Governor convened, some of the sort of leading
- 6 executives that are involved in deploying clean fuels and
- 7 vehicles in the State, and it actually included the CEO of
- 8 Coulomb, the previous company we just discussed, and it
- 9 included the CEO of Propel, and they said a number of things
- 10 about why they were doing business in California, and if I
- 11 add the three top, the first one was sort of a durable
- 12 policy framework that related to sort of clean energy, and
- 13 that included things like AB 32 and the Low Carbon Fuel
- 14 Standard, and then, secondly, they said the support from the
- 15 California Energy Commission's AB 118 program, and said that
- 16 the way we have designed this program, and the way we are
- 17 facilitating the deployment of the funds, has been
- 18 instrumental in their decision to continue to expand within
- 19 the state. So this was a really nice comment from some of
- 20 the leading organizations. And actually, even the ones that
- 21 did not get 118 money said good things about us, as well.
- 22 So that was encouraging. So I think I would like to move
- 23 the item.
- 24 COMMISSIONER BOYD: Second.
- 25 CHAIRPERSON DOUGLAS: All in favor?

1	(Ayes.)
2	The item is approved. Thank you, Ms. Allen.
3	Item 8. County Of Shasta. Possible approval of
4	Agreement 006-09-ECA for a loan of \$527,380 to the County of
5	Shasta to install two 125-ton chillers, nine packaged HVAC
6	units and controls, upgraded interior lighting and occupancy
7	sensor controls, and demand control ventilation systems. Mr.
8	Wang.
9	MR. WANG: Good morning, Commissioners. My name
10	is Joseph Wang with the Special Projects Office, and I am
11	the Project Manager for this loan. Shasta County is
12	applying for a \$527,380 loan to install these energy
13	efficiency projects in the County jailhouse, Coroner's
14	Office, Public House Building Complex, and the Cascade
15	Office Building. This loan will be used in conjunction with
16	the Small County Grant of \$480,664 from our Block Grant
17	Program, to fund the projects. The County will use the
18	money to install two new variable speed dry chillers and
19	nine packaged HVAC units, and they will also upgrade the
20	interior lighting, install LED in their lights, and
21	occupancy sensors. And the demand control ventilation
22	systems will be installed in its County garage and in the
23	kitchen to reduce energy use of the exhaust fans.
24	These projects will reduce the peak demand by
25	about 114 kW and save approximately \$52,500 annually with an $44$

- 1 estimated payback of 10.8 years. These projects are also
- 2 estimated to reduce greenhouse gas emissions by about 176
- 3 tons annually, and this funding will be coming out of the 3
- 4 percent interest ECAA loans. And these projects meet the
- 5 criteria of the ECAA Loan Program, and staff is recommending
- 6 your approval of this loan. I would be happy to answer your
- 7 questions.
- 8 COMMISSIONER BYRON: Madam Chair, I would move
- 9 Item 8 for approval.
- 10 COMMISSIONER EGGERT: Second.
- 11 CHAIRPERSON DOUGLAS: All in favor?
- 12 (Ayes.)
- 13 Item 8 is approved. Thank you, Mr. Wang.
- 14 Item 9. Town Of Yountville. Possible approval of
- 15 Agreement 010-09-ECA for a loan of \$200,473 to the Town of
- 16 Yountville to upgrade lighting and HVAC systems at various
- 17 town owned facilities, upgrade building electrical systems
- 18 and insulation, retrofit streetlights, and replace motors at
- 19 the waste water treatment plant. Ms. Perrin.
- 20 MS. PERRIN: Good morning. My name is Karen
- 21 Perrin with the Special Projects Office, and this is a
- 22 request from the Town of Yountville for a loan to leverage
- 23 their Block Grant funds and implement a number of energy
- 24 projects. The total cost of this project will be \$225,473.
- 25 The loan request is for \$200,473, which will be ECAA funded

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- 2 EECBG Block Grant funds in the amount of \$25,000. They will
- 3 also expect to receive a rebate from PG&E, which will be an
- 4 estimated incentive rebate of approximately \$12,000. The
- 5 energy projects include the following: retrofitting street
- 6 lights with LED lamps, retrofits of lighting systems and
- 7 motion sensors, exit signs, and upgrading HVAC systems at
- 8 several town owned facilities, insulation and electrical
- 9 upgrades, and replacement of motors at their wastewater
- 10 treatment plant. Once completed, this will save the town
- 11 approximately \$21,000 annually in reduced energy costs, and
- 12 this project has a 9.5 simple year payback, and we expect to
- 13 remove 44 tons of carbon dioxide from the environment every
- 14 year. I am seeking your approval for this loan request.
- 15 CHAIRPERSON DOUGLAS: Thank you, Ms. Perrin. And
- 16 I will note that I am quite impressed at how the Town of
- 17 Yountville appears to have taken the opportunity provided by
- 18 the Stimulus Act and the \$25,000 Block Grant to apparently
- 19 really assess what needed to be done, and could be done in
- 20 the town, and leverage it with a significantly larger ECAA
- 21 loan to make the wide ranging significant improvements.
- 22 This is a great example of ECAA and the Stimulus funding
- 23 working together. I am very pleased to see this.
- 24 COMMISSIONER BYRON: Yes, another one of the many
- 25 good projects brought before us. We do not comment on all

- 1 of them, but this and every other one that chose the
- 2 positive paybacks is certainly worthy of comment, however,
- 3 we will just probably continue to approve them without much
- 4 fanfare. Madam Chair, I move the item.
- 5 COMMISSIONER EGGERT: I will second it.
- 6 CHAIRPERSON DOUGLAS: All in favor?
- 7 (Ayes.)
- 8 This item is approved.
- 9 Item 10. ICF Consulting, LLC. Possible approval
- 10 of Contract 600-4709-018 for \$247,900 with ICF Consulting,
- 11 LLC to acquire background information and develop design
- 12 criteria for wind farms and related infrastructure
- 13 development in Baja California, Mexico. Ms. Crowell.
- MS. CROWELL: Good morning, Chairman and
- 15 Commissioners. My name is Miki Crowell with the Special
- 16 Projects Office. I am here to request for approval a
- 17 \$247,900 CMAS contract with ICF Consulting to develop
- 18 wind farm design standards in Baja California, Mexico. The
- 19 contract term is from June  $30^{th}$ , 2010 to March  $30^{th}$ , 2012.
- 20 This project was developed as a result of the 2008 Board of
- 21 Governor's Conference Energy Work Table that recommended
- 22 development of a border program for renewable energy. In
- 23 early 2009, Border Energy staff met with Baja California's
- 24 Energy Commission Director to discuss potential
- 25 opportunities to collaborate on wind energy development and

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- 2 Baja California does not have wind farm design
- 3 standards or coordinating infrastructure plans for
- 4 facilities such as transmission lines and substations, and
- 5 this is delaying approval of wind energy projects in Baja
- 6 California, which could serve California's renewable energy
- 7 market and are potentially eligible for the California RPS.
- 8 We developed this project in collaboration with the Baja
- 9 State Energy Commission to obtain background information
- 10 such as wind resource data and to program data necessary to
- 11 develop design criteria and standards for wind farm and
- 12 related infrastructure development in Baja California. And
- 13 I request your approval of this item. Thank you
- 14 CHAIRPERSON DOUGLAS: Thank you. Questions or
- 15 comments?
- 16 COMMISSIONER EGGERT: Just a quick comment. This
- 17 came through the Transportation Committee and, at first, I
- 18 was kind of curious as to why a wind project was coming
- 19 through the Transportation Committee, but I understand this
- 20 is part of a longstanding activity going on within the
- 21 Special Projects Division, and an opportunity to sort of
- 22 partner with our cross-border folks in Baja, to help them
- 23 develop their resources for renewables, specifically wind,
- 24 in a way that can actually deliver directly, you know,
- 25 electricity in the state. So, it looks like sort of moving

- 1 towards the conclusion of what seems to be a worthy
- 2 project.
- 3 COMMISSIONER BYRON: I am sure of Commissioner
- 4 Boyd were here, he would wax on for a while with regard to
- 5 cross-border relations and how this could be helpful, but I
- 6 do not want to put words in his mouth. Madam Chair, this
- 7 looks like a very positive project, information that is
- 8 needed to develop wind and would certainly benefit
- 9 California, so I would move approval of Item 10.
- 10 COMMISSIONER EGGERT: Second.
- 11 CHAIRPERSON DOUGLAS: All in favor?
- 12 (Ayes.)
- 13 Item 10 is approved. Thank you.
- 14 Item 11. Guidelines for Solar Electric Incentive
- 15 Programs. Possible approval of changes to the Guidelines
- 16 for California's Solar Electric Incentive Program. Mr.
- 17 Saxton.
- MR. SAXTON: Good morning, I am Patrick Saxton
- 19 from the Efficiency and Renewable Energy Division. Staff is
- 20 requesting approval of the third edition of the Guidelines
- 21 for California's Solar Electric Incentive Programs, and the
- 22 proposed changes are time critical, but of limited scope.
- 23 They include a revised implementation date for a required
- 24 Inverter Integral Meter Accuracy Test and also modifications
- 25 to a field verification protocol for photovoltaic arrays.

- 1 And I can provide additional details on any of the proposed
- 2 changes that you would like. One item to note is that
- 3 stakeholders do have subjects beyond the scope of these
- 4 proposed changes which they would like to discuss, and staff
- 5 agrees, and a full workshop on the Guidelines will be
- 6 scheduled for later this year. Staff does recommend that we
- 7 approve the third edition of the Guidelines today.
- 8 CHAIRPERSON DOUGLAS: Thank you, Mr. Saxton.
- 9 Questions, Commissioners?
- 10 COMMISSIONER BYRON: I am pleased to hear there
- 11 will be a workshop for that discussion. Is there anyone
- 12 here today who wishes to make comment on this?
- MR. SAXTON: I do not believe so. Only one
- 14 comment was received on the proposed changes, it was
- 15 positive and supportive, but it did request an additional
- 16 discussion at a later time.
- 17 COMMISSIONER BYRON: Thank you. Madam Chair, I am
- 18 prepared to move the item.
- 19 COMMISSIONER EGGERT: Second.
- 20 CHAIRPERSON DOUGLAS: All in favor?
- 21 (Ayes.)
- Item 11 is approved.
- Item 12. University Of California, Riverside.
- 24 Possible approval of Contract 500-09-051 for \$1.2 million
- 25 with the Regents of the University of California, Riverside

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- 2 motor fuel formulations for California's transportation fuel
- 3 markets. Mr. Gonzalez.
- 4 MR. GONZALEZ: Good morning, Chairman Douglas and
- 5 Commissioners. My name is Reynaldo Gonzales. I am the
- 6 staff lead for PIER Transportation's Vehicle Technologies
- 7 focus area. Before you is a project titled "Alternative"
- 8 Fuels and Vehicle Compatibility Research." This is a \$1.2
- 9 million natural gas funded interagency agreement with the
- 10 Center for Environmental Research and Technology Research
- 11 Facility, commonly referred to as CE-CERT, located at the
- 12 University of California at Riverside.
- 13 The State Alternative Fuels Plan recommends a
- 14 portfolio of alternative fuels, including alcohol fuels, to
- 15 achieve petroleum reduction goals and to reduce greenhouse
- 16 gas emissions. Major efforts worldwide are devoted to
- 17 expanding the production of all alcohol fuels. Thermal
- 18 chemical conversion is a key process in producing alcohol
- 19 fuels, and generally results in mixtures of various alcohols
- 20 or mixed alcohols. Separating the mixed alcohols into pure
- 21 alcohols such as ethanol requires an additional process and
- 22 results in increased fuel costs. Significant breakthroughs
- 23 in thermal chemical processes have resulted in the
- 24 feasibility of producing new mixed alcohol combinations more
- 25 economically and in quantity. Some of the benefits of using

1	mixed	alcohols	include	higher	energy	content	fuel	that	can

- 2 lead to the improved vehicle fuel efficiencies and lower
- 3 cost.
- 4 There is currently limited data evaluating the
- 5 compatibility and performance of mixed alcohol fuels with
- 6 legacy or near-term vehicle technologies. This project will
- 7 evaluate the compatibility of various mixtures of alcohol
- 8 fuels with various vehicle technologies, by performing
- 9 emission and fuel efficiency testing. This project is also
- 10 consistent with the AB 118 2010 and 2011 Investment Plan,
- 11 which mentions second generation biofuels, including mixed
- 12 alcohol fuels, as a likely strategy to meeting both the Low
- 13 Carbon Fuel Standard and Renewable Fuels Standard. This
- 14 project will establish a Technical Advisory Committee to
- 15 help guide the program. The Committee will include
- 16 membership of the California Air Resources Board staff and
- 17 the Energy Commission's Transportation Division staff will
- 18 also be invited to participate in the Technical Advisory
- 19 Committee.
- The Air Resources Board and Transportation
- 21 Division staff contributed to the development of the
- 22 Statement of Work for this project. Two key objectives for
- 23 this project include deriving information through the
- 24 research that will remove barriers to increase the use of
- 25 alternative fuels and, secondly, to identify opportunities

- 1 to optimize certain vehicle technologies to take advantage
- 2 of the higher energy content in the mixed alcohol fuels.
- 3 Staff recommends approval of this project.
- 4 CHAIRPERSON DOUGLAS: Thank you. Questions or
- 5 comments?
- 6 COMMISSIONER EGGERT: Is Professor Norbeck is he
- 7 still involved in CE-CERT?
- 8 MR. GONZALEZ: Yes, he is.
- 9 COMMISSIONER EGGERT: Okay. So, actually, when I
- 10 was actually, my first job out of college at Ford, we had
- 11 a number of different interactions with the CE-CERT Lab and
- 12 Professor Norbeck, working on a lot of the same issues, you
- 13 know, trying to understand the emissions impact of various
- 14 vehicle Power Train and fuel combinations. And so I think
- 15 they have clearly built up an excellent Center of Excellence
- 16 on this topic over the years, so I think your choice of
- 17 laboratory is a good one. I would also note, this project
- 18 is going to be really important as we are moving towards
- 19 these different formulations of fuels, and make sure that we
- 20 are not backsliding on any of our environmental protections.
- 21 I am very happy to see that you have reached out both
- 22 internally with respect to bringing on board representatives
- 23 from the other divisions, as well as externally through the
- 24 ARB, both in the design of the program and the ongoing
- 25 oversight through the advisory committee. I think that is

- 1 going to provide some excellent governance and guidance to
- 2 the research activities. I guess, in terms of the suite of
- 3 fuels that is going to be evaluated, ethanol obviously in
- 4 different formulations and percentages, are you looking at
- 5 things like biobutanol, as well?
- 6 MR. GONZALEZ: The mixed alcohol primary fuels, or
- 7 ethanol, as you mentioned, propanol and butanol are also in
- 8 that category, there are also some secondary fuels, such as
- 9 isopropanol and pentanol.
- 10 COMMISSIONER EGGERT: And then you said, in terms
- 11 of the testing, it includes both sort of legacy older
- 12 engines, new engines, and FFV systems, as well?
- MR. GONZALEZ: Correct.
- 14 COMMISSIONER EGGERT: And then what is the sort of
- 15 timeline of the output? When will we sort of start to see
- 16 the first results of the effort?
- 17 MR. GONZALEZ: This project is a three-year
- 18 project, and we hope to have some initial results within a
- 19 year to a year and a half.
- 20 COMMISSIONER EGGERT: Okay, excellent. That will
- 21 be very useful. Thank you.
- 22 COMMISSIONER BYRON: Madam Chair, you know,
- 23 California has a long history of doing research in this
- 24 area, and it is widely acknowledged worldwide in terms of
- 25 results and policy setting, and I am certain that this

- 1 project will fit into that category, as well. Mr. Misemer
- 2 has recently been briefing me a couple times on
- 3 transportation issues because I do not get the benefit of
- 4 attending Transportation Committee meetings, but I noticed
- 5 he is sitting at the table, is there a reason you are there?
- 6 Is it just to answer difficult questions? Or did you want
- 7 to add anything to this project?
- 8 MR. MISEMER: Phillip Misemer, Energy Research and
- 9 Development Division. No, Commissioner, this is a \$1.2
- 10 million project, it has many facets that span into both
- 11 vehicle technologies and fuel synthesis. Ray is providing
- 12 our expertise in Vehicle Technologies, my strength lies more
- 13 in the fuel synthesis, and I thought that there might be
- 14 opportunity to answer questions on either spectrum, so that
- 15 is why I am here.
- 16 COMMISSIONER BYRON: All right, well, thank you,
- 17 Mr. Gonzales, and Mr. Misemer, I am sorry I mispronounced
- 18 your name. Madam Chair, I am prepared to move the item for
- 19 approval.
- 20 COMMISSIONER EGGERT: I will second.
- 21 CHAIRPERSON DOUGLAS: All in favor?
- 22 (Ayes.)
- This item is approved.
- MR. GONZALEZ: Thank you.
- 25 CHAIRPERSON DOUGLAS: Item 13. Lawrence Berkeley

- 1 National Laboratory. Possible approval of \$6,750,000 for
- 2 Amendment 2 to Contract 500-03-026 with Lawrence Berkeley
- 3 National Laboratory Demand Research Center to continue
- 4 developing methods to determine and communicate electric
- 5 price information. Mr. Scruton.
- 6 MR. SCRUTON: Good morning, Commissioners. I am
- 7 Chris Scruton with the PIER Buildings Group, and the Demand
- 8 Response Research Center at Lawrence Berkeley Labs has been
- 9 working since 2004, and I wanted to mention a few of their
- 10 many accomplishments. They developed a data model called
- 11 Open ADR, which is essentially an open international non-
- 12 proprietary standard for communicating price information
- 13 over the Internet or by other means. And it has been
- 14 accepted as a foundational part of the Smart Grid at the
- 15 national level through NIST, the National Institute for
- 16 Standards and Technology. Other things they have done in
- 17 the end response of demand response, they have demonstrated
- 18 the capability of demand response in over 20 buildings where
- 19 they have shown an average load shed of approximately 10
- 20 percent, sometimes more, sometimes less, it depends on the
- 21 characteristics of the building, but often showing a load
- 22 shed capability of around 2 watts per square foot. They
- 23 developed the simulation tool that allows the estimation of
- 24 what that load shed capability will be. They have
- 25 demonstrated it in food processing facilities and in

- 1 refrigerated warehouses, which in California there is over
- 2 350. In some of the refrigerated warehouses, they have
- 3 shown load shed capability of over a megawatt for a four-
- 4 hour time period, with no detriment to the food storage
- 5 stored there. And most recently, they have been working
- 6 with the California Independent System Operator in ancillary
- 7 services, which is of great value for voltage and frequency
- 8 regulation on the grid, but requires a faster response, and
- 9 they demonstrated in three buildings in the Bay Area, and at
- 10 an industrial facility, that they could respond within one
- 11 minute and maintain that load shed, which I believe was
- 12 around 100 kilowatts for over a two-hour timeframe. So the
- 13 California ISO has been working closely with them, and is
- 14 very very interested in the potential of demand response for
- 15 meeting regulation needs.
- 16 So this proposed Amendment is proposed to be
- 17 funded through three PIER groups, the Energy Systems
- 18 Integration Group, the Buildings Energy Efficiency Group,
- 19 and the Industrial Agricultural and Water Group. It also
- 20 has over the next two years, it has got more than \$650,000
- 21 of confirmed cost share. And the areas that they are
- 22 proposing to work in, first at the Smart Grid level, where
- 23 this is rapidly developing within the last year with the new
- 24 Administration, it has achieved a very high prominence, and
- 25 there is a great impetus to integrate intermittent

- 1 renewables on the Grid. So NIST, as I said, has accepted
- 2 it as a foundational component of Smart Grid, but there is
- 3 still a lot of Standards work going on. So we would like to
- 4 see them working at the National level, as well as the State
- 5 level, and there is actually International interest, too.
- 6 The Government of Canada and NRCan has been implementing
- 7 using open 80R and chilling the demand response
- 8 capabilities, and I understand the Governments of Korea and
- 9 India are also interesting in implementing it. Other
- 10 projects, including establishing the value of demand
- 11 response, pricing models, and in end-use applications, they
- 12 want to go from commercial and industrial, where they
- 13 primarily operated up until now, even into the residential
- 14 modes where, at this point, the ZigBee Alliance and Smart
- 15 Energy Profile has been dominant, and the Demand Response
- 16 Center would like to assist in that effort to sort of bring
- 17 the public interest and make sure that the public interest
- 18 is represented there, working also an interface design in
- 19 appliance integration, and further commercial applications
- 20 with lighting, in particular, bi-level and multi-stage
- 21 lighting. The California Lighting Technology Center has
- 22 developed a lot of bi-level lighting fixtures that can be
- 23 integrated with demand response. In the IAW area, they want
- 24 to work in data centers, wastewater facilities, and on the
- 25 integration of intermittent renewables and the integration

- 1 of storage facilities such as plug-in hybrid electric
- 2 vehicles, and further work with the California ISO on the
- 3 ancillary services side.
- 4 So we would ask for your approval of this
- 5 amendment and I will do my best to answer any questions you
- 6 might have.
- 7 CHAIRPERSON DOUGLAS: Thank you, Mr. Scruton.
- 8 Questions?
- 9 COMMISSIONER BYRON: Well, not really a question,
- 10 Mr. Scruton, more a comment. I am very impressed with the
- 11 work of the Demand Response Center at Lawrence Berkeley
- 12 National Lab, and you have brought us another very good
- 13 project. I guess I would just like to note for my fellow
- 14 Commissioners in response to a bill that Senator Padilla
- 15 brought us, SB 17, we are defining the Smart Grid at the
- 16 Public Utilities Commission on behalf of I should state
- 17 this a little bit differently we are working with the PUC
- 18 in developing a Smart Grid definition for investor owned
- 19 utilities and, of course, we will be doing a similar process
- 20 here for the publicly owned utilities. The staff has done
- 21 an excellent job in working with the PUC. I would like to
- 22 thank Commissioner Ryan, who I actually talked with last
- 23 night at about 7:00 or 7:30, he is taking that, I believe,
- 24 to the full Commission for approval tomorrow. And it is the
- 25 beginning of a process, we will need to continue to work

- 1 with them, the open ADR issue is still on the table, and
- 2 the importance of getting dynamic pricing information is the
- 3 key element in all of this. There are certain consumer
- 4 groups that oppose that, and they are wrong. We need to
- 5 communicate to consumers pricing information so that they
- 6 can make informed decisions about the use of energy. I
- 7 think this Commission has done an excellent job since when
- 8 did you say 2004?
- 9 MR. SCRUTON: That is when they began.
- 10 COMMISSIONER BYRON: Yeah, so although it is a
- 11 sizeable contract, I think it is extremely important, and I
- 12 would like to compliment Mr. Scruton on bringing us another
- 13 excellent project and providing me the opportunity to update
- 14 my fellow Commissioners on SB 17.
- 15 CHAIRPERSON DOUGLAS: Thank you, Commissioner
- 16 Byron.
- 17 COMMISSIONER EGGERT: Thank you, Commissioner
- 18 Byron. I was briefed on this effort. Myself and
- 19 Commissioner Weisenmiller were at LBNL and got a nice
- 20 briefing from their team there and it was clear that they
- 21 had one of the leading efforts in DR. And I was looking
- 22 through this contract, it is remarkably comprehensive, we
- 23 are asking them to do a sizeable amount of activity and, of
- 24 course, we are giving them a nice chunk of change, but it
- 25 looks like it is going to be a good value. You had noted

- 1 some of the connections to, for example, the CLTC, which is
- 2 good, you had also mentioned plug-in hybrids. I hope that
- 3 they are in good or close contact with our CEC funded Plug-
- 4 in Vehicle Center down the street, as well.
- 5 MR. SCRUTON: We will make sure they are.
- 6 COMMISSIONER EGGERT: Okay, excellent, because I
- 7 know there are a number of sort of synergistic research
- 8 activities that could be occurring, definitely with CLTC, we
- 9 were just there earlier -this week -- yeah, this week, and
- 10 they were talking about some of the opportunities that
- 11 existed for bi-level, multi-level, including demand response
- 12 lighting, so it seemed like a huge huge potential for energy
- 13 savings. Actually, my only real question is, I noticed one
- 14 of the primary subcontractors here is Levy Associates, and I
- 15 do not suppose there is any you do not have to recues
- 16 yourself, or exit the room or anything like that.
- 17 MR. SCRUTON: A mere coincidence of name.
- 18 COMMISSIONER EGGERT: Okay.
- MR. SCRUTON: No relation.
- 20 COMMISSIONER EGGERT: So yeah, so I think this
- 21 looks great and I would like to move the item.
- 22 COMMISSIONER BYRON: Second.
- 23 CHAIRPERSON DOUGLAS: All in favor?
- 24 (Ayes.)
- This item is approved.

- 1 MR. SCRUTON: Thank you.
- 2 CHAIRPERSON DOUGLAS: Item 14. Lawrence Berkeley
- 3 National Laboratory. Possible approval of Contract 500-09-
- 4 049 for \$3.4 million with Lawrence Berkeley National
- 5 Laboratory to develop additional information on the
- 6 relationship between ventilation and health, and performance
- 7 and productivity in commercial buildings. Ms. Mueller.
- 8 MS. MUELLER: Good morning. I am Marla Mueller
- 9 with the California Public Interest Energy Research Program
- 10 in the Environmental area. We call this research proposal
- 11 before you today the "Healthy Zero Energy Buildings
- 12 Program." The goal of the Healthy Zero Energy Buildings
- 13 Program is to provide high quality research and ventilation
- 14 and indoor environmental quality that will assist the Energy
- 15 Commission in developing standards that simultaneously
- 16 provide for occupant fresh air needs, and keep energy
- 17 demands to a minimum. Commercial buildings that over-
- 18 ventilate waste energy and add unnecessary to the carbon
- 19 emissions with no clear benefit to building occupants.
- 20 Commercial buildings that do not provide adequate fresh air
- 21 to their occupants may compromise their health,
- 22 productivity, and performance. In order to optimize energy
- 23 efficiency in buildings, it is necessary to understand in
- 24 great detail how much ventilation is needed, which
- 25 technologies are most suitable delivering it, and where and

- 1 how in the buildings it should be supplied. To address
- 2 this issue, it is important to quantify the relationship
- 3 between ventilation and occupant outcomes, understand the
- 4 sources and dynamics of key indoor pollutants, and develop
- 5 recommended thresholds on acceptable occupant outcomes.
- 6 This information is needed to develop standards that can be
- 7 used to design and operate buildings with minimum energy
- 8 consumption, while meeting occupant needs, therefore
- 9 understanding the basic ventilation needs of building
- 10 occupants becomes a crucial component of California's energy
- 11 and carbon strategy.
- 12 The Health Zero Energy Buildings Program is a
- 13 joint program between the PIER Buildings and PIER
- 14 Environmental Groups. In addition, we work closely with the
- 15 Commission's Building Standards Implementation Group. This
- 16 is a complicated, multi-disciplinary program. To fully
- 17 realize the goals of the program may require additional
- 18 tasks and funding in the future. To be successful, this
- 19 program will need to engage stakeholders, including the
- 20 Energy Commission, the California Department of Health
- 21 Services, California Air Resources Board, California
- 22 Division of Occupational Safety and Health, ASHRAE, and
- 23 private sector ventilation and building industries. This
- 24 will be done through a series of workshops and technical
- 25 advisory meetings. The results of this program will be

- 1 presented to regulatory bodies and at relevant conferences.
- 2 We ask for your approval of this program.
- 3 CHAIRPERSON DOUGLAS: Thank you. Questions or
- 4 comments?
- 5 COMMISSIONER EGGERT: So, I was very happy to see
- 6 this effort. I know this is an item that has come up a
- 7 number of times, looking at the issues associated with
- 8 ensuring that we retain healthy indoor environments as we
- 9 sort of seal up, make tighter both new buildings and through
- 10 the retrofit activity of existing buildings. And I was
- 11 happy to see I noticed you have ASHRAE as a partner there,
- 12 and I believe there is a new ASHRAE standard that is sort of
- 13 going into effect as we speak for some of these items on the
- 14 air exchange and such, and discussion about how that might
- 15 affect retrofit activities. And I guess that was one
- 16 question I had, is, you know, it is clear that you are
- 17 looking at this as applied to new buildings, but to what
- 18 extent do you see this research effort looking at different
- 19 types of older buildings?
- MS. MUELLER: I think once we have a better
- 21 understanding of the needs of the occupants that could also
- 22 be applied to existing buildings, so I do see that that will
- 23 help in that area, also.
- 24 COMMISSIONER EGGERT: Is there any opportunity to
- 25 take advantage of some of the retrofit programs where we are

- 1 going to have a lot of the before and afters, where we have
- 2 folks with, perhaps, leaky facilities, and then after the
- 3 retrofit they will be substantially more sealed up. Is
- 4 there maybe a way of tapping into that activity to help
- 5 supplement the research findings?
- 6 MS. MUELLER: This is a program, so it is kind of
- 7 evolving as we move through it, so I think that is a
- 8 possibility. I also want to mention that we are just moving
- 9 forward in a multi-family project where we will be doing
- 10 exactly that, we will be looking at identifying how best to
- 11 retrofit buildings with energy efficiency and indoor
- 12 concerns, and we will be doing before and after in those
- 13 cases.
- 14 COMMISSIONER EGGERT: Excellent.
- 15 CHAIRPERSON DOUGLAS: We have a member of the
- 16 public who would like to make a comment on this item. Erik
- 17 Emblem, would you come forward?
- 18 MR. EMBLEM: Good morning. Chair, Commissioners,
- 19 I appreciate the ability to talk to you today, allowing me
- 20 some time. Let me identify, I am here representing the
- 21 Joint Committee on Energy and Environmental Policy that was
- 22 created by California SMACNMA, Sheet Metal Air Conditioning
- 23 Contractors and the California Sheet Metal Workers. And
- 24 kind of a historical kind of, to give you some history, in
- 25 the late '70s, these two groups got together with then

- 1 Governor Brown and President Carter, and we had the second
- 2 oil embargo, we had lines of cars at gas pumps, so it all
- 3 kind of spurred on Title 24 and everything that is going on,
- 4 but from that moment on, this industry -- and from the
- 5 industry we brought our intern here today to talk a little
- 6 bit about has been committed to ventilation and comfort
- 7 and safety in buildings. And what we started in 1980 in
- 8 California was the National Energy Management Institute. We
- 9 started it right here in Sacramento. And at that time it
- 10 was ERDA, Energy Reserve and Development Administration,
- 11 under Jimmy Carter, and the State of California, and this
- 12 industry that I am representing today, all committed \$1
- 13 million each to start a system of reviewing energy, energy
- 14 use in buildings in California, and started with schools.
- 15 And they trained 2,000 energy auditors to do audits in
- 16 schools in California in our training centers. So this has
- 17 evolved today, but interestingly enough, as we started
- 18 tightening up these buildings and attaining savings, we
- 19 compromised the indoor air quality, the environmental
- 20 quality of the buildings. So, in the early '80s, we
- 21 partnered with the EPA and the Department of Energy is
- 22 involved, and developed the first certification program for
- 23 technicians and contractors on doing indoor air quality
- 24 evaluation of buildings. I am saying all that because we
- 25 are here to support this. I think this is very innovative,

- 1 it is going to update a lot of work we have already done.
- 2 I think in the early '80s, Kodak had done some studies on
- 3 the effects of the indoor environment on the productivity of
- 4 their employees, and they did a lot of anecdotal studies
- 5 that turned out to be pretty true. We commissioned an
- $6\,$  actual scientific study that was headed by Chuck Dorgan of
- 7 Dorgan & Associates that received an international award for
- 8 its scientific work and ASHRAE award for it, on the effects
- 9 of indoor air quality and the productivity of people. We
- 10 updated that study when I was Executive Director of NEMI in
- 11 2002, where we moved it from just office buildings and into
- 12 the hospitality industry. Now, California enjoys a lot of
- 13 hospitality industry and tourist industry, so that report, I
- 14 think, would be great to feed into this. Chuck Dorgan Sr.
- 15 did the original study for us, and Chad Dorgan, his son, who
- 16 is actually a professor now and doing a lot of the
- 17 commissioning training with University of Wisconsin, did the
- 18 follow-up work.
- 19 We would like to offer our services with our 625
- 20 contractors and 25,000 workers in the State of California,
- 21 to work with Berkeley and the Energy Commission to further
- 22 this work. We think it is needed and just commend it and
- 23 support if 100 percent. Thank you for letting me speak.
- CHAIRPERSON DOUGLAS: Well, thanks for being here
- 25 and thanks for speaking on this issue.

- 1 COMMISSIONER BYRON: Mr. Emblem, I would like to
- 2 also add my kudos. You have been before this Commission a
- 3 number of times and your comments are always very helpful,
- 4 but the bit of the history lesson, very informative, but
- 5 your continued support and cooperation with the Commission
- 6 is greatly appreciated. Thank you for being here today.
- 7 COMMISSIONER EGGERT: Yeah, just I want to second
- 8 that, Mr. Emblem, and actually another bit of history
- 9 trivia, I actually interned with Chuck Dorgan, I went to the
- 10 University of Wisconsin in Madison, and did a short stint
- 11 and so I got to know him and his son, and that is a very
- 12 impressive operation, so it is kind of a blast from the past
- 13 to hear that name and I am glad to see that their work is
- 14 still delivering good value and benefits, so thank you very
- 15 much.
- 16 COMMISSIONER BYRON: I think we should probably
- 17 approve the item. Madam Chair, I would like to move its
- 18 approval.
- 19 COMMISSIONER EGGERT: I will second it.
- 20 CHAIRPERSON DOUGLAS: All in favor?
- 21 (Ayes.)
- This item is approved. Thank you.
- 23 Item 15. National Oceanic and Atmospheric
- 24 Administration. Possible approval of Contract 500-09-047 for
- 25 \$1,105,000 with the National Oceanic and Atmospheric Administration

- 1 (NOAA) to research the potential effects of atmospheric
- 2 rivers and airborne particles from man-made processes on
- 3 precipitation in California. Mr. O'Hagan.
- 4 MR. O'HAGAN: Thank you. Good morning,
- 5 Commissioners. This proposed interagency agreement with
- 6 NOAA, National Oceanic and Atmospheric Administration, is to
- 7 help conduct research and data analysis to improve our
- 8 understanding of two significant meteorological processes
- 9 that affect precipitation in California, meaning, as well,
- 10 water supply, hydropower generation, and flood safety. NOAA
- 11 is offering to do this research and we are leveraging \$2.5
- 12 million of NOAA's funding for this project, we do not call
- 13 it "matched funding," but it is referred to as "in lieu"
- 14 funding since they are a federal agency. And this research
- 15 is an outgrowth of collaborative efforts between the
- 16 Department of Water Resources, the Air Resources Board, the
- 17 University of California, and several of the DOE National
- 18 Laboratories. And the idea is to provide research that will
- 19 compliment some of the efforts of these other agencies, as
- 20 well. The two aspects that are being addressed in this
- 21 proposed research are atmospheric rivers which are long
- 22 narrow bands with high water vapor content, that stretch
- 23 from the tropical latitudes to the West Coast of California,
- 24 Oregon, and Washington, and once they reach land, the
- 25 loragraphic [phonetic] factors, they produce large amounts

- 1 of precipitation. There was recently, last October, I
- 2 believe, in Big Sur and in a couple days they received 24
- 3 inches of precipitation during an atmospheric river event.
- 4 There has been significant flooding documented with
- 5 atmospheric river events. If you recall back, oh, 10-12
- 6 years, there was significant flooding on the Russian River,
- 7 which was an atmospheric river event. As there rivers move
- 8 inland, they reach the mountains and they go over, but there
- 9 are two barrier jets, there is one that goes up along the
- 10 coast, that are perpendicular to the path of the river, and
- 11 there is one in front of the Sierra Nevada, and these can
- 12 cause the rivers to stall out and become relatively
- 13 stationary, and that is when you get the significant
- 14 downpour of precipitation. So, to understand how these
- 15 barrier jets affect atmospheric river events, we are
- 16 proposing this research which would involve funding NOAA to
- 17 analyze data to be collected this past winter, as well as
- 18 deploy additional equipment to study this phenomena and
- 19 analyze the resulting data for the coming winter. NOAA
- 20 estimates the atmospheric rivers contribute 40 percent of
- 21 the precipitation in the state, there are a number of events
- 22 that may occur from three to four, possibly eight or more in
- 23 a year, usually with more events, it has been a wetter year.
- 24 It is real important if we can understand how these barrier
- 25 jets affect the atmospheric rivers, we can have a better

- 1 idea of forecasting which watersheds will receive more snow
- 2 than rain, in terms of hydropower generation, and certainly
- 3 flood safety is a major concern. The other aspect is to
- 4 understand that NOAA's study is to understand how
- 5 particulate matter affects precipitation. Earlier PIER
- 6 funded studies have estimated that particular matter in the
- 7 atmosphere has inhibited precipitation, perhaps reducing
- 8 precipitation as much as 15 percent. What NOAA is proposing
- 9 to do is to collect meteorological data that help us
- 10 understand the near surface meteorological processes, and
- 11 how particulate matter interacts with that. So they look at
- 12 points where the rain that turns precipitation from freezing
- 13 to rain, they would look at snow levels in the mountains, to
- 14 help us understand what these processes are and how aerosols
- 15 or particulate matter interact with these. This information
- 16 will compliment other PIER and other agency research on this
- 17 issue, and perhaps we can see if this is really affecting
- 18 water supply and hydropower generation within the state.
- 19 Thank you, and I ask your approval of this proposed project,
- 20 and I am open for any questions.
- 21 CHAIRPERSON DOUGLAS: Thank you. Any questions?
- 22 COMMISSIONER EGGERT: This looks extremely
- 23 interesting and important. Does this include interaction
- 24 between the precipitation and the snowpack, as well? Is
- 25 that part of it?

- 1 MR. O'HAGAN: Yes. The stations will mainly be
- 2 focusing on a transect from coastal areas up to the Sierra
- 3 Nevada Foothills, but they will look at snow patterns, they
- 4 will be using radar that goes up, so you will see higher
- 5 altitude precipitation effects, as well as the near surface,
- 6 and that will include snow events, too. But the concern is
- 7 particulate matter does affect ice, crystal formation, which
- 8 would affect snow, melted snowfall as well as rain
- 9 precipitation.
- 10 COMMISSIONER EGGERT: Yeah, I think clearly, I
- 11 know some of the climate change scenarios that were run as
- 12 part of the analysis that has fed into the development of AB
- 13 32 and, of course, a lot of the current work looking at
- 14 adaptation identifies the potential for significant changes
- 15 in precipitation patterns, you know, affecting California's
- 16 water supply, so it looks like this will be but I also
- 17 recognize there is a lot of uncertainty in a lot of those
- 18 estimates, so it looks like this will help contribute to the
- 19 understanding and provide us a better understanding of what
- 20 could actually happen. So this looks good. I would like to
- 21 move the item.
- 22 COMMISSIONER BYRON: And, Mr. O'Hagan, thank you
- 23 for my atmospheric lesson for the day, I learned some things
- 24 here that I had never known before. Thank you, and I will
- 25 second the item.

1	CHAIRPERSON DOUGLAS: All in favor?
2	(Ayes.)
3	This item is approved. Thank you, Mr. O'Hagan.
4	MR. O'HAGAN: Thank you very much.
5	CHAIRPERSON DOUGLAS: Item 16. One Cycle Control.
6	Possible approval of Grant Agreement PIR-09-020, awarding
7	\$400,000 to One Cycle Control to demonstrate a 15-kilowatt
8	peak load reduction system. Mr. Kazama.
9	MR. KAZAMA: Good morning, Chair Douglas and
10	Commissioners. I am Don Kazama of the Energy Research and
11	Development Division's Industrial, Agricultural, and Water
12	Team. And this is one of three energy storage demonstration
13	projects that were competitively selected under the \$6.9
14	million Emerging Technologies Development Grant. And these
15	projects are designed to demonstrate demand response through
16	energy storage. Collaborating with program staff in the
17	selection process were all three of California's investor
18	owned electric utilities. This project is designed to
19	utilize repurposed electric and hybrid electric vehicle
20	batteries, and at its core is a newly developed high-speed
21	microelectronic bi-directional power conversion system that
22	drives the process. The company, the recipient, is going to
23	provide \$105,000 in matched funds, and this project has
24	previously been approved by the RD&D Committee. The U.S.

Department of Energy estimates that California has about

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- 2 manufacturing activities, and about one-quarter of these
- 3 businesses are classified as light industrial facilities
- 4 with peak electric demands up less than 200 kilowatts. And
- 5 these customers currently pay a pretty high electric demand
- 6 charge, and these costs are going to be getting even higher
- 7 as mandatory time dependent electric charges are going to
- 8 come into play.
- 9 Now, demand response is very very difficult to
- 10 implement in industrial facilities because you cannot stop
- 11 production. Energy storage provides an effective means of
- 12 providing demand reduction without interrupting this
- 13 production. Now, the goals of one-cycle controls energy
- 14 storage technology is to reduce peak load on the customer
- 15 side of the meter, to save them electricity costs, and to
- 16 provide electric utilities with a more stable electric
- 17 demand load profile. The one-cycle control design
- 18 efficiently changes single phased DC power from the
- 19 batteries to very clean three-phase AC power that is
- 20 required by industrial facilities. Each energy storage
- 21 module in this system is about the size of a small under-
- 22 counter refrigerator and it produces 15 kilowatts of power
- 23 at 480 volts AC, which is pretty common in manufacturing and
- 24 food processing plants. Now, most existing power converters
- 25 are physically very large. Think of your home 21-cubic-foot

- 1 refrigerator, and these things can weigh up to 800 pounds.
- 2 They are also pretty inefficient. They only have a 70
- 3 percent conversion efficiency, which means that 30 percent
- 4 is a loss, which usually goes out the window in heat, and
- 5 they cannot very well convert single phased DC power into
- 6 clean three-phase AC power because their switching system is
- 7 a little bit too slow. Now, one cycle control has what is
- 8 called a bi-directional converter, which uses high speed
- 9 micro-electronics that can cleanly and efficiently simulate
- 10 three-phase AC power, and the efficiency on this unit is
- 11 stated as being 98 percent, so you only have 2 percent loss,
- 12 which is pretty significant. It is also physically very
- 13 small, it is about the size of a briefcase, and it weighs in
- 14 at about 20 pounds.
- Now, the purpose of this demonstration project is
- 16 to validate the scalability of the current bench scale
- 17 prototype to an actual California light industrial
- 18 manufacturing plant that happens to manufacture robotics
- 19 systems. Now, to assess the veracity of the technology and
- 20 validate the peak demand savings available from it, Southern
- 21 California Edison will conduct measurement and verification
- 22 studies of the project at the customer site. Edison will
- 23 also conduct a follow-on study to extrapolate peak load
- 24 reduction savings from that particular plant, service-wide.
- 25 And if the results are promising, Edison will also assist in

- 1 technology transfer and commercialization of its technology
- 2 by offering financial incentives to customers who will adopt
- 3 it.
- 4 Now, projected statewide, this technology has the
- 5 potential to reduce peak electric demand in California's
- 6 industrial sector by about 150 megawatts, and this is a cost
- 7 savings to California industry of about \$1.8 million per
- 8 demand event. On the utilities side, this technology
- 9 benefits California's electric distribution grid by reducing
- 10 load at congestion points. And the value to utilities of
- 11 this capability would obviously be extremely high.
- 12 And lastly, I am pleased to state here that all
- 13 the businesses involved in this project are California
- 14 businesses. The recipient, One Cycle Control, is based in
- 15 Irvine. The demonstration site, California Computer
- 16 Research, Inc., is based in Newport Beach. And the battery
- 17 supplier, A123 Systems, is located in the San Gabriel
- 18 Valley. Now, due to the tremendous potential benefits to
- 19 both electric customers and electric utilities, we would
- 20 like the Commission to go ahead and approve this agreement
- 21 with One Cycle Control. And I would be happy to answer any
- 22 questions you might have.
- CHAIRPERSON DOUGLAS: Thank you very much.
- 24 Questions, Commissioners?
- 25 COMMISSIONER BYRON: This is an important project

- 1 because, you are absolutely right, storage has always been
- 2 looking at load shifting, and addressing peak demand could
- 3 have great potential savings; however, as I understand it,
- 4 Mr. Kazama, the ratcheting of the demand meter is such that,
- 5 once you hit a peak demand, you are stuck with that peak
- 6 demand on your utility bill for the rest of your life. And
- 7 I am really glad to see that you have Southern California
- 8 Edison involved in this project because they would have to
- 9 be convinced about the reliability of this piece of
- 10 equipment, and be able to allow changes to the way that peak
- 11 demand is set. Isn't that correct?
- MR. KAZAMA: That is correct, and it is true about
- 13 the peak demand charge. Once it is set, then it is set like
- 14 that pretty much for life, until, of course, a new higher
- 15 demand is set. Now, this energy storage package is designed
- 16 to be either cut in automatically, or it can be a serial
- 17 feed-through, which will reduce say, the 200 kilowatt
- 18 customer implements this in their facility, they can reduce
- 19 their demand instantaneously by 15 kilowatts and it can stay
- 20 that way.
- COMMISSIONER BYRON: Well, and of course,
- 22 equipment has to be taken out occasionally for maintenance
- 23 or repair, and so if, during that time, you had hit your
- 24 peak demand again, you are stuck, so I encourage you to
- 25 continue to work closely with the investor owned utility and

- 1 fellow Commissioners, there will likely need to be a policy
- 2 change in the regulatory arena in order to enable the
- 3 financial benefits to customers from this kind of
- 4 technology. But I think it has tremendous advantages
- 5 because that peak, the utilities have argued for decades, is
- 6 really the basis for that demand charge, and this can be
- 7 substantial for some businesses.
- 8 MR. KAZAMA: Thank you, Commissioner, for your
- 9 points. They are well taken.
- 10 COMMISSIONER BYRON: Thank you.
- 11 COMMISSIONER EGGERT: Yeah, just I think a
- 12 comment. I was encouraged to see the fact that they were
- 13 using basically the transportation battery packs from the -
- 14 the plan is to use the plug-in Prius A123 packs?
- MR. KAZAMA: That is correct. Basically, this
- 16 technology can be used with any type of deep discharge
- 17 battery pack, as long as it meets the capacity requirements.
- 18 But A123 happens to be purpose building, these lithium ion
- 19 packs, for upcoming Toyota Prius cars.
- 20 COMMISSIONER EGGERT: Right, and I know some of
- 21 the other research that is underway through PIER is looking
- 22 at batteries second use opportunities, of which, yeah, this
- 23 is clearly one, that can provide the ability to reduce the
- 24 cost of the battery pack to the consumer if they have the
- 25 ability to use it in a second life application like this,

- 1 you know, I think they are saying once it reaches sort of
- 2 80 percent capacity, that it would be used for this purpose
- 3 and still potentially have a significant amount of utility
- 4 associated with it. So that was very encouraging. So, yes,
- 5 this looks like a great project. I will move the item.
- 6 COMMISSIONER BYRON: Second.
- 7 CHAIRPERSON DOUGLAS: All in favor?
- 8 (Ayes.)
- 9 This item is approved. Thank you.
- MR. KAZAMA: Thank you.
- 11 CHAIRPERSON DOUGLAS: Item 17. University Of
- 12 California, Davis. Possible approval of Contract 500-09-050
- 13 for \$150,000 with the Regents of the University of
- 14 California, Davis to demonstrate the use of a novel
- 15 ultraviolet treatment system for wastewater disinfection.
- 16 Mr. Roggensack.
- MR. ROGGENSACK: Thank you. Good morning,
- 18 Commissioners. My name is Paul Roggensack. I work with the
- 19 Energy Research and Development Division in the PIER
- 20 Industrial Agricultural Division. We are asking approval of
- 21 this proposed interagency agreement to advance the
- 22 technology of ultraviolet treatment of wastewater. This
- 23 conventional wastewater treatment of using ultraviolet light
- 24 consists of flowing the wastewater through a channel with
- 25 the UV lamps immersed within the wastewater. This

- 1 innovative technology consists of a Teflon tube vertically
- 2 arranged with it is about three-feet in length with about
- 3 six-inches in diameter, and they create a vortex that flows
- 4 upwards, and the vortex creates a better mixing of the
- 5 wastewater so you get more complete radiation, plus the
- 6 centrifugal force of the vortex pushes the water closer to
- 7 the ultraviolet lamps, and the lamps there are four lamps
- 8 on the exterior of the Teflon tube, near the top of the
- 9 tube. So because you have got these features, the better
- 10 mixing and the centrifugal force factor, you can use less
- 11 bulbs to treat an equal volume of water. And based on that,
- 12 the University estimates it can reduce the energy associated
- 13 with ultraviolet light 30 percent.
- Other benefits of this project will be reduced
- 15 operation and maintenance costs. The bulbs are on the
- 16 exterior, so they are easy to replace and remove. A typical
- 17 ultraviolet treatment, you have to remove an entire array of
- 18 bulbs when just one goes out, so you have to shut down the
- 19 whole treatment process just to replace one bulb. Another
- 20 benefit of this project is that it will make ultraviolet
- 21 more feasible to smaller facilities plus industrial
- 22 facilities that have to comply with wastewater permits. So
- 23 the benefits of this are improved feasibility, reduced
- 24 energy, and reduced operation and maintenance. And I would
- 25 also like to stress that, although this is applied to

- 1 wastewater, it has the potential to be used for water
- 2 treatment, as well, potable water. So I would be happy to
- 3 answer any questions you have on this and we ask for your
- 4 approval.
- 5 COMMISSIONER BYRON: Madam Chair, I move approval
- 6 of Item 17.
- 7 COMMISSIONER EGGERT: Second.
- 8 CHAIRPERSON DOUGLAS: All in favor?
- 9 (Ayes.)
- 10 That item is approved. Thank you.
- 11 Item 18. Rensselaer Polytechnic Institute.
- 12 Possible approval of Contract and there is a change to the
- 13 number it is 500-09-012 for \$60,000 for a one year
- 14 membership in the Partners Program at Rensselaer Polytechnic
- 15 Institute's Lighting Research Center (LRC). Mr. Davis.
- MR. DAVIS: Good morning, Commissioners. I am
- 17 Dustin Davis from the PIER Buildings Team. This agenda item
- 18 seeks your approval for renewal of our longstanding
- 19 partnership with the Lighting Research Center at Rensselaer
- 20 Polytechnic Institute. The Lighting Research Center is the
- 21 nation's oldest research institution devoted to lighting.
- 22 The Energy Commission has actually participated in this
- 23 partnership every year since 2000. The Partnerships is an
- 24 association of academia, industry, utilities, and the
- 25 leading government research agencies, including the Energy

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- 2 Authority, and the U.S. Environmental Protection Agency,
- 3 leveraging over \$500,000 in public-private funds annually.
- 4 This partnership provides a significant and necessary
- 5 scientific compliment to the Commission's interest in the
- 6 regular development of market-ready energy efficient
- 7 lighting products and systems, such as those brought forth
- 8 by the California Lighting Technology Center at U.C. Davis.
- 9 The Lighting and Research Center excels at conducting more
- 10 basic research, while the California Lighting Technology
- 11 Center focuses on packaging up this basic research and
- 12 connecting that research to the market with lighting
- 13 products and systems that not only perform efficiently, but
- 14 have aesthetic qualities that help these products appeal to
- 15 consumers.
- 16 The Commission and California have garnered
- 17 considerable value from this partnership. The proposed
- 18 contract will enable the advantages of collaboration to
- 19 continue to flow to California utilities and energy
- 20 efficient stakeholders. As in past years, the partnership
- 21 will provide information resources for the Commission and
- 22 our electric utilities, and generally ensure that the
- 23 partnership is both relevant and responsive to California's
- 24 energy efficiency R&D agenda and utility emerging technology
- 25 programs. Your approval of this partnership is recommended,

- 1 and I would be happy to answer any questions you might
- 2 have.
- 3 COMMISSIONER EGGERT: Thank you, Mr. Davis.
- 4 Actually, I think you answered one of my questions with
- 5 respect to the relationship between this activity and the
- 6 CLTC here, so as I understood what you said of their
- 7 involvement and a little bit more of the basic research?
- 8 MR. DAVIS: Yes.
- 9 COMMISSIONER EGGERT: I am wondering, do you have
- 10 an example of some of the work that is going on there that
- 11 is focused on the lighting technologies at the basic level?
- MR. DAVIS: Well, I mean, yeah, for example, since
- 13 this partnership was created, the lighting research center
- 14 was able to quantify the relationship between daylight,
- 15 light, and human health, so as far as like human factor type
- 16 stuff, they have been able to quantify, you know, that sort
- 17 of benefit there, and the need for that, which contributing
- 18 to that knowledge base, institutions like the California
- 19 Lighting Technology Center can draw from that and take that
- 20 into consideration for their purpose, which is mostly kind
- 21 of manipulating lighting systems and products to most appeal
- 22 to the market and the market connections aspect, more
- 23 applied-type research, to see hopefully an effect in the
- 24 market within a few years. So, again, it is complimentary
- 25 of each other and the LRC feeds into the CLTC's knowledge

- 1 base to increase efficiency, overall.
- 2 COMMISSIONER EGGERT: Yeah, and I noticed they
- 3 seem to have a lot of the same partners between the two
- 4 different labs, including the industry partners, and so the
- 5 CLTC, do they what is sort of the means of communication,
- 6 do they have sort of representation on each other's how do
- 7 they sort of make sure they are coordinating their research
- 8 activities, I quess?
- 9 MR. DAVIS: Well, basically, with this
- 10 partnership, it enables us it is two site visits, so for
- 11 one site visit, we are able to go out to New York, myself
- 12 typically goes, or someone possibly from the CLTC could join
- 13 me for that, and that is the time to kind of network with
- 14 the other partners in the LRC Partnership Program, and also
- 15 kind of present what is going on with PIER and what we have
- 16 been working on, and vice versa, and then another thing, as
- 17 far as the other site visit, is that the Lighting and
- 18 Research Center folks actually come out to California
- 19 through this partnership program, and they present a number
- 20 of items, their agenda basically is determined by the needs
- 21 of California, whether that is us, CLTC and other energy
- 22 efficiency stakeholders, and basically we create that agenda
- 23 and they will come out here and talk to us, what they are
- 24 working on, that kind of connects with those needs.
- 25 COMMISSIONER EGGERT: Okay, thanks.

- 1 COMMISSIONER BYRON: Madam Chair, I think
- 2 sometimes we think it is all invented here in California,
- 3 and this is an example where a staff obviously gains
- 4 expertise and takes advantage of technology elsewhere. I
- 5 certainly would like to recommend that we approve this item.
- 6 But I would also add, I think this is the last of seven PIER
- 7 projects, excellent projects brought to this Commission
- 8 today, and I would like us to consider changing Public
- 9 Interest Energy Research to Public Investment Energy
- 10 Research because that is how I have come to think of this,
- 11 as Chair of the RD&D Committee, another important aspect of
- 12 our work is collaboration, and I would recommend approval of
- 13 Item 18 for that purpose.
- 14 CHAIRPERSON DOUGLAS: Is that a motion,
- 15 Commissioner?
- 16 COMMISSIONER BYRON: Yes.
- 17 COMMISSIONER EGGERT: Yeah, and I guess I would
- 18 just also say, it has been heartening to hear, you know, the
- 19 examples of collaboration across agencies outside of the
- 20 state, links between PIER and the other divisions, the
- 21 energy efficiency and the 118, so glad to see that coming,
- 22 the description of these programs and the design of these
- 23 programs, so I will second the item.
- 24 CHAIRPERSON DOUGLAS: All in favor?
- 25 (Ayes.)

1	Item 18 is approved.
2	MR. DAVIS: Thank you.
3	CHAIRPERSON DOUGLAS: Thank you.
4	Item 19. Administrative Subpoena. Possible
5	approval of an administrative subpoena directing the
6	California Independent System Operator (CA ISO) to provide
7	data needed to evaluate generation and transmission outages,
8	congestion, must-offer waivers, and load. Ms. Holmes.
9	MS. HOLMES: Good morning, thank you. Caryn
10	Holmes with the Commission's Legal Office. The item in
11	front of you, the last item today, is an Administrative
12	Subpoena directing the Independent System Operator to
13	provide data that it collects and uses in the course of its
14	business to the California Energy Commission. This data is
15	used for a variety of analyses, including the summer outlook
16	that is used to help identify infrastructure needs
17	associated with the replacement of once-through cooling
18	facilities, as well as some of the collaborative work that
19	we do at the Public Utilities Commission. The Independent
20	System Operator has no objection to providing this data, but
21	does require that entities seeking data that it collects
22	from market participants do so through an Administrative
23	Subpoena or a Court Order. We have done this on an annual
24	basis since 2004, this is the seventh subpoena; the only
25	difference between this one and last wear's is that there

- 1 are some changes in terms that reflect the fact that some
- 2 of the data that the ISO is collecting is a little bit
- 3 different than it was last year, and sometimes there are
- 4 different formats and different time periods, and we have
- 5 updated this subpoena to reflect that.
- 6 The ISO was provided with a copy of the Subpoena
- 7 and encouraged to offer comments and suggestions, but they
- 8 have had none, so staff is recommending that the subpoena be
- 9 approved so they can continue to receive access to this
- 10 information this year and next.
- 11 COMMISSIONER BYRON: Madam Chair, I think this is
- 12 referred to as the "Friendly Annual Subpoena of the ISO,"
- 13 but, of course, I would note that I think all subpoenas from
- 14 Ms. Holmes seem to be friendly subpoenas.
- MS. HOLMES: That is a scary thought,
- 16 Commissioner.
- 17 CHAIRPERSON DOUGLAS: Certainly this one. Any
- 18 other questions or comments, Commissioners?
- 19 COMMISSIONER EGGERT: No questions.
- 20 COMMISSIONER BYRON: Madam Chair, I move approval
- 21 of Item 19.
- 22 COMMISSIONER EGGERT: Second.
- 23 CHAIRPERSON DOUGLAS: All in favor?
- 24 (Ayes.)
- 25 Item 19 is approved.

- 1 MS. HOLMES: Thank you very much.
- 2 CHAIRPERSON DOUGLAS: Thank you, Ms. Holmes.
- 3 Item 20. Minutes. Approval of the June  $2^{nd}$ , 2010
- 4 Business Meeting Minutes.
- 5 COMMISSIONER BYRON: I move approval.
- 6 COMMISSIONER EGGERT: Second.
- 7 CHAIRPERSON DOUGLAS: All in favor?
- 8 (Ayes.)
- 9 The Minutes are approved.
- 10 Item 21. Are there any Committee presentations or
- 11 discussion?
- 12 COMMISSIONER BYRON: Madam Chair, I have one item
- 13 I would like to bring to your attention and to Commissioner
- 14 Eggert's attention. Last week, actually, I think it was two
- 15 weeks ago because we have not had a business meeting since
- 16 then, there was a "California Smart Energy Investments:
- 17 Intelligent Path to Energy Efficiency" workshop that was put
- 18 on in the afternoon by UC Davis Energy Efficiency Center,
- 19 another one of Commissioner Eggert's alma maters. And at
- 20 that, besides the excellent speakers, one of which was
- 21 President Peevey at Public Utilities Commission, he
- 22 acknowledged the efforts of one of our former colleagues,
- 23 and I think it is worth mentioning here, and that is
- 24 Commissioner Geesman, who seemed to have somewhat single-
- 25 handedly thwarted the efforts of a single corporation's

- 1 effort to pass a proposition on the ballot earlier this
- 2 month. It is certainly recognition of his efforts to
- 3 restore at least my faith in the fact that you cannot buy an
- 4 election, at least until November, really gives me great
- 5 hope that there is opportunity and occupation for former
- 6 Energy Commissioners. But I think it is also worth noting
- 7 that another proposition has qualified to find its way on
- 8 the November ballot, and that proposition, as I understand
- 9 it, is to essentially suspend AB 32. And President Peevey
- 10 also noted at this meeting that that proposition had
- 11 passed, and I would certainly like to suggest to my fellow
- 12 Commissioners, although we do not spend any time or effort
- 13 on these matters, former Energy Commissioners do, as do PUC
- 14 Presidents. That corporation that spent nearly \$50 million
- or more to essentially look out for consumer and citizen
- 16 interest in the State of California, perhaps they should be
- 17 challenged to spend at least that much to make sure that we
- 18 look out for the future interest of the citizens of the
- 19 State of California in opposition to Prop 32. I mention
- 20 that to you because I plan to challenge them on that
- 21 particular item and I hope that you may have opportunity to
- 22 do so, as well. Thank you for indulging me.
- CHAIRPERSON DOUGLAS: Well, thank you,
- 24 Commissioner. And I know that there are matters on the
- 25 ballot past election in the upcoming election that have been

- 1 of significant interest to all of us, that we have been
- 2 watching, and I understand that we have asked our Chief
- 3 Counsel to provide guidance on appropriate activities not
- 4 for former, but for current Commissioners. Former
- 5 Commissioners can do what they want. So I believe he will
- 6 be providing some guidance in the near future, Mr. Levy?
- 7 MR. LEVY: It is forthcoming, yes.
- 8 CHAIRPERSON DOUGLAS: Thank you. Commissioner
- 9 Eggert, anything?
- 10 COMMISSIONER EGGERT: I think maybe just to sort
- 11 of reiterate again, sort of one of the things that came
- 12 forth from the summit last week was the singular most
- 13 important factor was sustained and durable environmental
- 14 policy, that was necessary for those companies to bring
- 15 their investments to the state, and they are talking
- 16 literally billions of dollars that are flowing into
- 17 California for clean energy technologies, because of our
- 18 environmental policies, and so it was a really great
- 19 testament to the importance of sustaining the policies that
- 20 we do have.
- I wanted to make a quick point, which was for a
- 22 report out from a meeting we had on Monday morning, which
- 23 was with the utilities on our energy efficiency standards,
- 24 and just say that it was a very productive meeting. We
- 25 talked a lot about how we can work together with the

- 1 utilities to provide the underlying data analysis and
- 2 evaluation of different appliance and building standards
- 3 that are forthcoming. You know, they have got a sizeable
- 4 amount of resources that they can apply to assist us in
- 5 developing the record for good cost-effective energy
- 6 efficiency standards, and so we are going to be following up
- 7 on that meeting and taking them up on that offer to help
- 8 supplement some of our scare resources for some of these
- 9 standards. And you know, I think working together, we can
- 10 actually get quite a bit accomplished over the next several
- 11 years. I think that is it.
- 12 CHAIRPERSON DOUGLAS: Thank you, Commissioners.
- 13 Item 22. Chief Counsel's Report.
- MR. LEVY: Yes, I would like to request a closed
- 15 session on two items, please. That would be the California
- 16 Communities Against Toxics vs. South Coast Air Quality
- 17 Management District, and also the Western Riverside Council
- 18 of Governments vs. Department of General Services.
- 19 CHAIRPERSON DOUGLAS: Thank you, Mr. Levy.
- Item 23. Executive Director's Report. We will
- 21 move to closed session after.
- MR. LEVY: Actually, may we do that at 1:30
- 23 instead of immediately after the meeting? I have got a we
- 24 may not?
- 25 CHAIRPERSON DOUGLAS: I do not think so.

- 1 MS. LEVY: Is there some other time later today
- 2 that we are available, or 1:00 perhaps?
- 3 CHAIRPERSON DOUGLAS: 7:00? How about tomorrow
- 4 morning? Why don't we continue this tomorrow morning,
- 5 Commissioner Byron? Tomorrow morning before 11:00?
- 6 MR. LEVY: That will work, thank you.
- 7 CHAIRPERSON DOUGLAS: All right, so why don't we
- 8 say, instead of "generally before 11:00," why don't we say
- 9 tomorrow morning at 10:00 a.m.?
- MR. LEVY: Very good, thank you. Actually, that
- 11 is not working for me.
- 12 CHAIRPERSON DOUGLAS: Tomorrow morning at 9:00?
- 13 MR. LEVY: Could we make it tomorrow afternoon?
- 14 No.
- 15 CHAIRPERSON DOUGLAS: No.
- MR. LEVY: All right, let's just do it right after
- 17 this meeting and we will make it a quick one.
- 18 CHAIRPERSON DOUGLAS: All right.
- MR. LEVY: Thank you.
- 20 CHAIRPERSON DOUGLAS: Item 23. Executive
- 21 Director's Report.
- MS. JONES: Thank you. I wanted to do two things
- 23 today. First of all, I wanted to announce the appointment
- 24 of Pat Perez as the Deputy Director for the Fuels and
- 25 Transportation Division, and introduce him. Pat, come on

- 1 up. Many of you know him. He has worked in the Executive
- 2 Office for the last three years as an Assistant Executive
- 3 Director working on Climate Change and our ARRA activities.
- 4 Prior to that, he worked within the Fuels and Transportation
- 5 Division, managed the Special Projects Office and the Fossil
- 6 Fuels Office. He has worked on a variety of projects
- 7 throughout his career here on the Commission, and he brings
- 8 in-depth knowledge of energy and transportation issues to
- 9 the job, with demonstrated experience and skills at
- 10 managing. And so I am pleased that he will be taking on
- 11 this new function as the Deputy Director for Fuels and
- 12 Transportation.
- 13 CHAIRPERSON DOUGLAS: Congratulations, Pat.
- MR. PEREZ: Thank you very much, Chairman and
- 15 Commissioners, and Melissa and Claudia, in particular, for
- 16 your vote of confidence here. I am very excited about
- 17 returning to the Division where I spent 20 years of my
- 18 professional and technical life, and it appears to be
- 19 perfect timing for the transition with the near term
- 20 completion of the AB 118 Investment Plan here in August, and
- 21 I will be able to get my feet running quickly on the new
- 22 Investment Plan. And I am just very very excited to be
- 23 working as part of the Executive Management Team here. I am
- 24 certainly going to miss many of you in the Executive Office
- 25 for my Climate Change work, as well as the Recovery Act, but

- 1 as we all know, it is all interconnected and intertwined,
- 2 so there is no way for me to escape those two areas. So
- 3 thank you once again for the support.
- 4 COMMISSIONER BYRON: Excellent. Congratulations
- 5 again.
- 6 COMMISSIONER EGGERT: Yeah, congratulations. I
- 7 think it was an excellent choice, Melissa, and we are very
- 8 fortunate to have you in that position and to be able to
- 9 draw on your experience and expertise.
- 10 MR. PEREZ: Thank you for your kind comments.
- 11 MS. JONES: Great, and I wanted to quickly update
- 12 you on our efforts with the PUC and the IOUs, as well as our
- 13 SEP contractors in developing an Energy Upgrade California
- 14 brand so that we can better inform the public about the
- 15 activities here under ARRA, as well as at the PUC, and the
- 16 programs administered by the IOUs. We had a successful
- 17 meeting last week and we have significant resources that
- 18 have been made available to do outreach and education, and
- 19 marketing, as well. So we are working very collaboratively
- 20 with all the parties on that. And the second thing I wanted
- 21 to do on updates was to just note that the 2010 IEPR is now
- 22 underway with the first workshop on June 14<sup>th</sup>, where the
- 23 focus was on the Federal Stimulus program, and Measurement,
- 24 Evaluation and Verification work. We had Laura Chick from
- 25 the Inspector General's Office here, as well as Matt Rogers

2	complimentary things about the programs that we are
3	administering. And so that was very good. We had two more
4	workshops - well, we had a total of six workshops scheduled
5	but I just wanted to introduce the next two, on July $8^{\rm th}$ , we
6	will be covering government building retrofit projects that
7	have been funded by ARRA, and then, on July $13^{\rm th}$ , we will be
8	holding a workshop on the Commission's PIER and AB 118
9	Programs, and how they have helped to bring additional ARRA
10	funds into the state. And that is for me. Thank you.
11	CHAIRPERSON DOUGLAS: Thank you, Ms. Jones.
12	Item 24. Public Advisor's Report.
13	MS. JENNINGS: I have nothing to report at this
14	time. Thank you.
15	CHAIRPERSON DOUGLAS: Thank you.
16	Item 25. Is there any public comment? Seeing
17	none, we will move to Executive Session. Thank you.
18	(Whereupon, at 12:16 p.m., the business meeting was
19	adjourned.)
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from the Department of Energy, and we heard many

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